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EDWARDS'S
BOTANICAL REGISTER:

OR,

ORNAMENTAL FLOWER-GARDEN
AND SHRUBBERY:

CONSISTING OF

COLOURED FIGURES OF PLANTS AND SHRUBS,
CULTIVATED IN BRITISH GARDENS;

ACCOMPANIED BY THEIR

History, Best Method of Treatment in Cultivation, Propagation, &c.

CONTINUED

By JOHN LINDLEY, F.R.S. L.S. AND G.S.

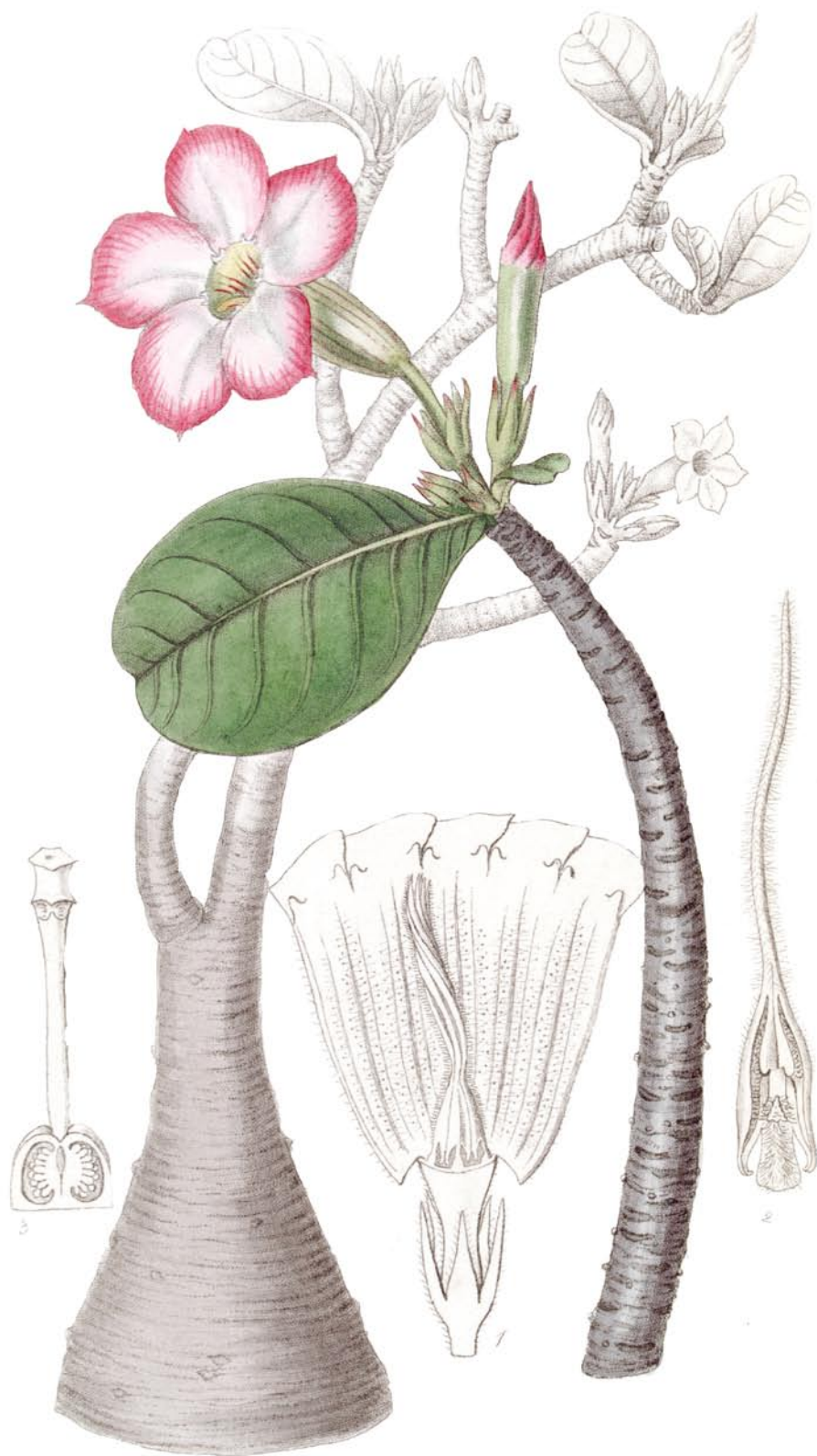
PROFESSOR OF BOTANY IN THE UNIVERSITY OF LONDON,
&c. &c. &c.

VOL. XV. ☐

—viret semper—nec fronde caducâ
Carpitur.

LONDON:
JAMES RIDGWAY, 169, PICCADILLY.

M.DCCC.XXIX.



ADENIUM Honghel.

The Honghel bush.

 PENTANDRIA' MONOGYNIA.

Nat. ord. APOCYNACEÆ. (DOGBANES, *Vegetable Kingdom*, p. 599.)

ADENIUM, Römer & Schultes.—*Calyx* 5-partitus, lobis lanceolatis (ex A. Honghel), glandulosus. *Corollæ* tubus inferne cylindraceus, angustatus, dein ampliatus, exappendiculatus, externe pubescens, parte ampliata inferiori longiore infundibuliformi-cylindracea, interne subpubescente; lobis æstivatione sinistrorsum convolutis, non replicatis, tubo brevioribus. *Filamenta* 5, brevissima, superne in tubi parte angustiore; *antheræ* lineari-sagittatæ, medio cum stigmate cohærentes apice setâ pilosâ longitudine corollæ terminatæ. *Glandulæ* circa ovaria nullæ. *Ovaria* 2, globosa (ex Vahl), elliptica (in A. Honghel) et glabra. *Stylus* 1. *Stigma* capitatum, apice bidentatum, basi (ex A. Honghel) membranâ reflexâ cupuliformi cinctum. *Ovula* 00, pendentia, imbricata. *Folliculi*.—*Semina* (ex A. Honghel) cylindraceo-prismatica, utrinque comosa, coma inferiore serius caduca. *Testa* striata, denticulis retrorsis (sub lente videndis) aspera. *Albumen* tenuissimum. *Embryo* rectus; radícula supera, ovoideo-oblonga, apice conica; cotyledonibus radícula multo brevioribus, ovatis, foliaceis, margine involutis?—Frutices *caudice carnosos, globoso; ramis carnosulis; foliis sparsis, in axilla setiferis, integris; floribus ad apicem ramorum approximatis, breviter pedicellatis, purpureis* (ex A. Honghel).—Genus habitu *Pachypodii*, sed seminibus bicomosis!—*Alph. DC. Prodr.* 8. 411.

A. *Honghel*; foliis obovato-oblongis basi attenuatis sessilibus apice obtusis mucronulatis glabris nervis lateralibus obliquis, bracteis lanceolatis v. linearibus pedicello longioribus, pedicellis villosis, calyce extus pubescente, lobis corollæ obovatis obtusis.—*Alph. DeCandolle Prodr.* 8. 412.

This curious thing flowered in the garden of the Horticultural Society in June last, having been presented to that establishment by the Court of Directors of the East India Company, with other singular plants from Aden. It forms one or two fleshy stems, like those of a *Plumieria*, on the top of a club-footed protuberance, and these stems divide sparingly into a few dumpy branches, each bearing two or three leaves only. Its rate of growth is so slow that half a century is not too great an age to assign to such an individual as that now represented.

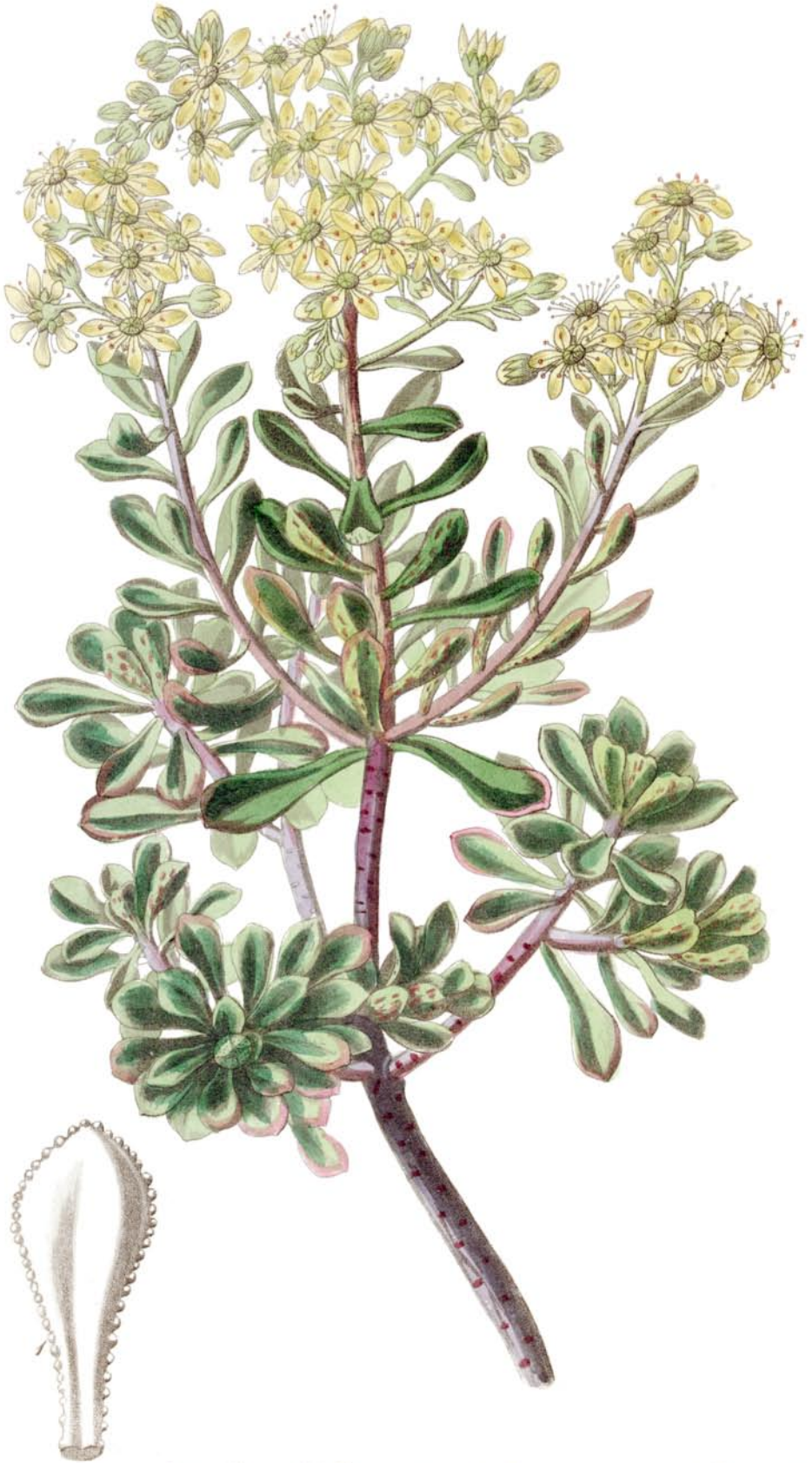
Its appearance is the more singular, because from its leafless-stunted branches there appear many very handsome

rose-coloured flowers, bordered with crimson, and fully two inches long.

According to Alphonse DeCandolle this shrub is found in dry places in Wallo and Senegambia, where it is commonly called "Honghel;" we also have it from the late Mr. Forbes, who found it at Delagoa Bay. It would, therefore, appear to be widely dispersed through Africa and the neighbouring part of Asia. Its fruit, on Mr. Forbes's specimen, consists of a pair of slender diverging hoary follicles, each about four inches long.

Fig. 1. represents the calyx, and a part of the corolla cut open to shew the long-tailed anthers, and five rows of glandular hairs which grow on the corolla alternate with the stamens; 2. is a stamen seen from within; 3. is a section of the ovary, style, and stigma.

At present little is known of the habit of this; but it seems to be a plant of easy culture, requiring a dry stove, where it can be fully exposed to bright sunshine. It grows well in a mixture of peat, loam, and sand, when the pot is well drained. Being a plant of slow growth it does not require much water at any period of the year, and should be kept almost dry after the leaves have fallen off, the plant being in a resting state. All plants having thick fleshy stems like this, are formed by nature for those parts of the world where they are periodically subjected to extremes of dryness, and unless we treat them as nature herself does, we cannot expect to be successful in their cultivation.



* ÆŌNĪŪM cruēntūm.

Bleeding Stoneleek.

DECANDRIA DECAGYNIA.

Nat. ord. CRASSULACEÆ.

AEONIUM. *Calyx* campanulatus, cyathiformis, aut turbinatus, apice 6-12-dentatus, aut medium usque 6-12-fidus. *Petala* totidem quot calycis lacinia, perigyna, stamina superantia ad apicem disci hypogyni inserta, basi in annulum cum filamentis coalita, æstivatione imbricata, apice contorta. *Stamina* petalorum numero dupla, breviora petalis opposita. *Filamenta* filiformia, aut magis minusve dilatata. *Antheræ* ovata, aut rotundato-ovata, obtusæ, acutiusculæ, aut apiculatæ, sacculis confluentibus, lateraliter dehiscentibus, post emissionem pollinis revolutis. *Squamæ* perigynæ nullæ, vel quadratæ, claviformes aut obcordatæ, apice integræ aut obsolete crenatæ, erectæ, ovariis applicatæ. *Ovaria* petalis numero æqualia, intus recta aut subincurva, acuta, basi receptaculo immersa. *Styli* 3-quetri, extus leviter incurvi. *Stigmata* acuta, demum papillato-capitata. *Cocca* follicularia indehiscentia, aut demum basi et dorso per disruptionem dehiscentia. *Placenta* filiformes, ad marginem interiorem cocci, aut crassæ per medium valvarum curvatæ. *Semina* elongato-ovata, aut oblique subpyriformia. *Embryo* ovatus obesus. *Cotyledones* ovata, sessiles. *Radicula* brevissima obtusa.—Suffrutescentes *ramosi*, aut herbæ *basi lignescentes propagines emittentes*. Folia *rosulata*, *crassa*, *subtus convexa*, vel *gibba*, *marginē pilosa cartilagineo-ciliata*, aut *papillata*. Paniculæ *cymose*, aut *thyrsoidæ*. Flores *lutei*, vel *fulvi*, *rarissime rosei*. Pedicelli *in præfloratione nutantes*. Inflorescentia *centrifuga*. Webb Hist. Nat. Canar. p 184.

Æ *cruentum*; caule fruticoso erecto, ramis rectis puniceo-cruentatis glanduloso-puberulis, paniculis cymosis, foliis cuneato-spathulatis glaberrimis crassis in petiolum attenuatis margine papillosis supra viridibus subcanaliculatis subtus convexiusculis lineolis sanguineis notatis, floribus parvis 6-8-meris, antheris muticis, coccis brevibus anticè subrectis dorso planis. Webb *Phytogr. Canar.* p. 186. t. 28.

No one who has studied this order critically will deny that the distinctions of the old genera *Sedum* and *Sempervivum* are unsatisfactory, in consequence of the uncertainty in the

* Among the synonymes adduced by Dioscorides to his αἰζων μέγα, the *Sempervivum arboreum*, occurs the word αἰωνιν, which Mr. Webb has adopted for the present genus.

number of the parts of fructification, by which these genera have been always distinguished. Mr. Webb therefore, in his work on the Canaries, has remodelled these genera, assigning them new characters, and separating from them three groups, to which the names *Æonium*, *Aichryson*, and *Greenovia* are severally applied.

Of these the genus *Æonium* at least seems well characterized by having its seed-vessels partially sunk in the receptacle and not regularly opening by the ventral suture, but only at the base and back by an irregular tearing. Of the plants referred to this genus, one, "which may be regarded as the precursor of the genus," is the *Sempervivum arboreum*, which occurs farthest to the northward ; three others are from Madeira, viz. *S. glandulosum*, *tabulæforme*, and *glutinosum*; the rest are from the Canaries, and include *Sempervivum Smithii*, *barbatum*, *villosum*, *ciliatum*, *casпитosum*, *Haworthii*, *urbicum* and *canariense*.

The plant now figured was raised some years ago in the Nursery of Mr. Young of Milford, from seeds sent by Mr. Webb from the Canaries; where it is found on the stones and bare rocks of the ancient cavern of Tigalate, near the base of the Pine region of the isle of Palma, on the road from Mazo to Fuencaliente. It was named in allusion to the streaks of crimson on its leaves, and to the wounds which Messrs. Webb and Berthellot received from an accident in the neighbourhood of the basaltic rocks where it grows. The height of the plant in its wild state is said to be about two feet; the specimen from which our figure was taken was not half so tall.

Our figure was executed in May, 1834.

It requires the same treatment as *Mesembryanthemum* and similar plants, like most of which it is best cultivated in wide, shallow pots, well drained with potsherds, and filled with a mixture of loam and old mortar, covered with fine sand. It requires a warm dry situation during summer, and a cool situation with very little water during winter.



ÆONIUM Youngiānum.

Mr. Young's Houseleek.

DODECANDRIA DODECAGYNIA.

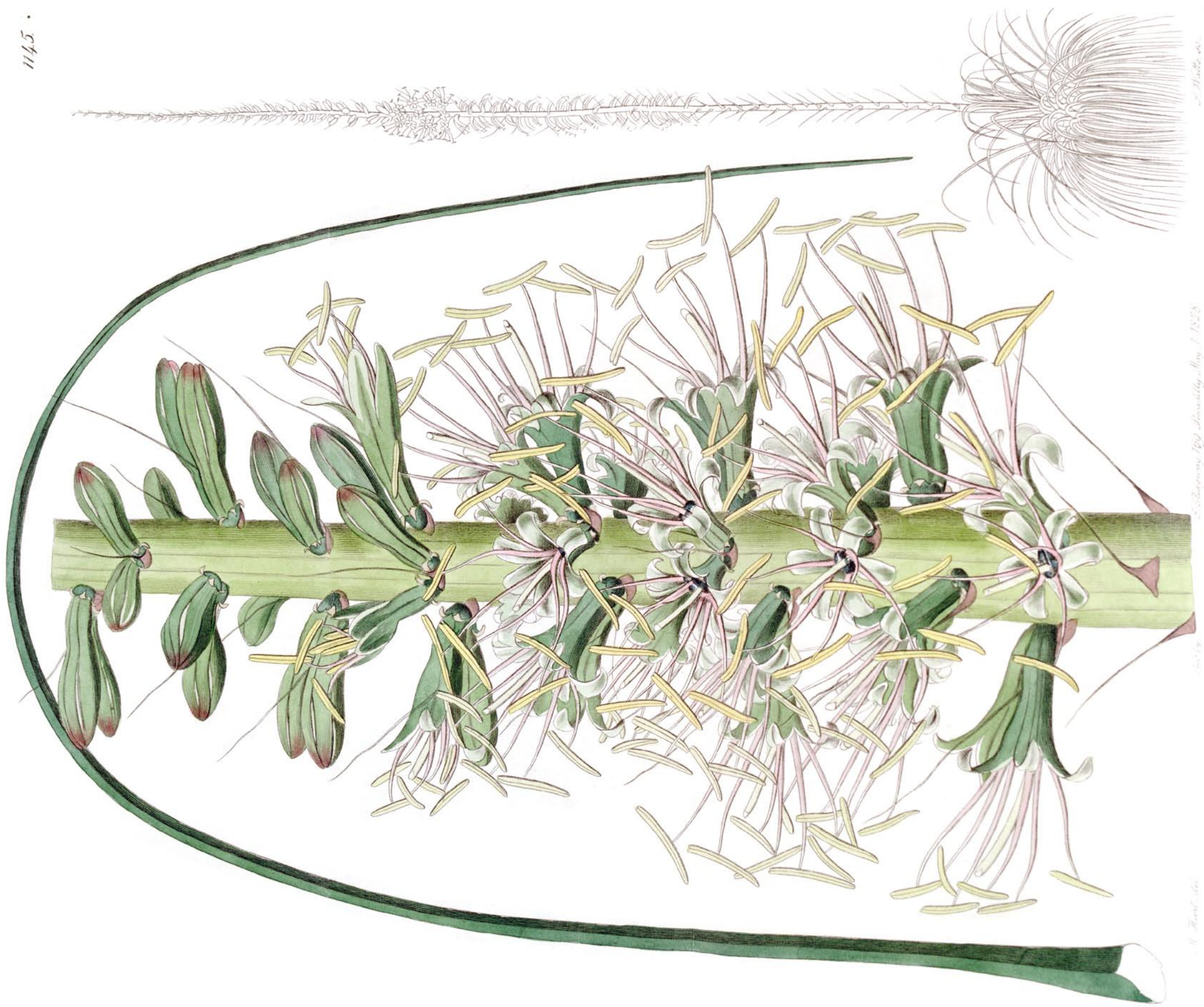
Nat. ord. CRASSULACEÆ.*ÆONIUM. Botanical Register, 1841. fol. 61.*

Æ. Youngianum; caule fruticoso crasso, foliis subcartilagineis crassis lucidis saturate viridibus obcordato-spathulatis basi subtetragonis apice obsolete mucronatis margine attenuatis breviter ciliatis. *Webb Histoire Naturelle des isles Canaries, Vol. III. p. 197.*

This plant, hitherto only known from the brief Latin phrase above quoted, flowered in June, 1843, in the nursery of Mr. Wm. Young of Milford, near Godalming, after whom it was named by Mr. Barker Webb, who discovered it in the Canaries.

It appears nearly allied to *Æonium* (*Sempervivum*) *ar-boreum*, which, according to Mr. Webb, does not grow in the Canaries; but we have no information concerning it.

Fig. 1. represents a section of the ovaries. Fig. 2. a young petal and stamen some time before the flower expands.



AGAVE *geminiflora*.*Twin-flowered Agave.*

HEXANDRIA MONOGYNIA.

Nat. ord. AMARYLLIDÆ.

AGAVE L.—*Perianthium* superum, tubulosum infundibulare, carnosum, limbo sexfido, laciniis erectis revolutisve. *Stamina* sex, exserta, summo tubo inserta. *Antheræ* lineares versatiles. *Stylus* simplex. *Stigma* 3-lobum dilatatum carnosum. *Capsula* clausa, trilocularis, polysperma. *Semina* nigra, nitida, plana, disticha.—*Plantæ* (Americanae) *caudice simplici, foliis imbricatis, carnosis, margine dentatis v. filamentosis; scapo terminali, floribus herbaceis.*

A. *geminiflora*; foliis linearibus utrinque convexis anticipitibus patentissimis apice spinosis scapo simplicissimo, floribus sessilibus geminis, staminibus longè exsertis. *Spreng. syst.* 2. 79.

A. *geminiflora*. *Ker in journal of science*, vol. 2. p. 88. *tab.* 1.

Yucca Boscii. “*Desfontaine’s cat. hort. par.*”

Buonaparte juncea. *Schlechtendahl suppl. ad. enum. hort. ber.*

Littæa geminiflora. “*Tagliabuc in Bibl. ital.* 1. 100—111.” *Haworth’s succulent plants suppl.* p. 38.

Radix ramosa, paucis onusta radiculis flexuosis, colore obscuro. Caudex erectus, teres, lævis, cicatricibus, foliorum squamosus. Folia obscure viridia, in orbem ad apicem caudicis congesta, sessilia, anticipitia, basi tantummodo incrassata, farcta, substriata, glabra, flaccida, mucrone osseo (sphacelato) terminata, marginibus per atatem filamentosis. Scapus centralis, simplex, erectus, teres, lævis, substriatus, infernè squamosus, squamis lanceolato-dentatis, supernè multiflorus, floribus in seriem spiralem crebram interruptam dispositis. Flores sessiles, geminati, in spicam longissimam digesti, bractea lineari-lanceolata, subciliata, florem subæquante suffulti, ochroleuco viridi-violacei (viridiscentes), basi cujusdam floris duabus aliis bracteolis, ovato-acutis, ciliatis scariosis præditi. Corolla (perianthium) tubuloso-campanulata, sexangularis: limbus sexfidus, revolutus, laciniis lanceolatis. Filamenta erecta, laciniarum limbi basi inserta, coque duplò longiora. Antheræ versatiles, magnæ, oblongæ; longitudinaliter, sulcatae. Germen (ovarium) inferum, ovatum, 6-gonum. Stylus erectus, simplex, teres, supernè crassior, corollâ paulò longior. Stigma inconspicuum. Capsula polysperma, 3-gona. Semina duplici serie in singulo loculo, semiorbicularia, plana, nitida, nigra; Ker. loc. cit.

A native of South America, whence it is supposed to have been introduced to Europe about 1795. In 1815 it

flowered for the first time in the Garden of the Duke of Litta, at Lainate, near Milan. That specimen had, a caudex 3 feet high, and 7 inches thick; the leaves were 3 feet long; the flower-stem 24 feet high; and the number of flowers one thousand four hundred and eighty-two. The plant from which the annexed drawing was made blossomed in the Nursery of Mr. Joseph Knight, in November 1826: the stem was 14 feet high, and the number of flowers eight hundred and forty-six. In the Gardens both of this country and of the continent; it was, before flowering, confounded with *Buonapartea juncea*, a totally different plant, resembling this in nothing but the narrowness of its leaves, which are otherwise so different, that no person who possessed the slightest acquaintance with the natural affinities of plants could have fallen into the mistake. But at that time Botany was too often mere empiricism,—a stigma from which it has not yet recovered in this country. The Botanist of artificial arrangements could do nothing without his stamens and styles: but for the student of nature, no better evidence upon this plant than the leaves afford would have been desired, to determine whether or not it was a *Buonapartea*.

By Signor Tagliabue, who had the care of the Duke of Litta's plant, it was found, that if the central bud of the stem were seared with a hot iron, a brood of young plants would be produced round the base; and accordingly such was the method he practised in propagating it.

With respect to the genus of this plant, we feel ourselves fully justified in adopting the opinion of Mr. Ker, that it is a mere *Agave*, upon the ground that it possesses no character either of fructification or vegetation, by which it can be essentially distinguished; unless the revolute limb of the perianthium be so considered; upon which, however, little value is to be placed. Indeed, with this exception, it agrees in every particular with the genuine *Agaves*. With regard to habit, we should have presumed that no one would suppose that rather vague, but sometimes important quality, to depend upon a difference in the breadth of the leaves of two plants; and yet, except in this particular, we know of nothing which can have led

of *P. cordifolia*, as is noted by Professor Sprengel: but which is not referred to by M. Decandolle, who quotes no figure as existing of *P. cordifolia*, although it has been long since represented in the *Botanical Magazine*, under the false name of *P. oppositifolia*.

J. L.



* AGAVE saponaria.

The Soap Aloe.

 HEXANDRIA MONOGYNIA.

Nat. ord. AMARYLLIDACEÆ, § AGAVEÆ.

AGAVE. *Botanical Register*,. vol. 14. fol. 1145.

A. *saponaria*; acaulis, inermis, glaucescens, rhizomate crasso carnosso, foliis teneris lanceolatis acuminatis semiamplexicaulibus, spicâ simplici, bracteis acuminatis ovario brevioribus (perianthii laciniis revolutis). *Botanical Register for 1838, misc. no.* 141.

A full description of this plant having been already given in the present work, it is needless to repeat it.

Mr. Skinner is related to have found it used as a substitute for soap in *Peru*, where he saw it growing on a sandy plain; it seems however to be Mexican; and to be very nearly the same as the *Polianthes mexicana* of Zuccarini, which is described as having white flowers, and is probably an allied species. That it is an Agave admits I think of no doubt; but, unlike those gigantic species with which we are most familiar, it flowers readily and does not then perish, but continues to grow without suffering; in fact it is a true perennial, while the others are analogous to annuals.

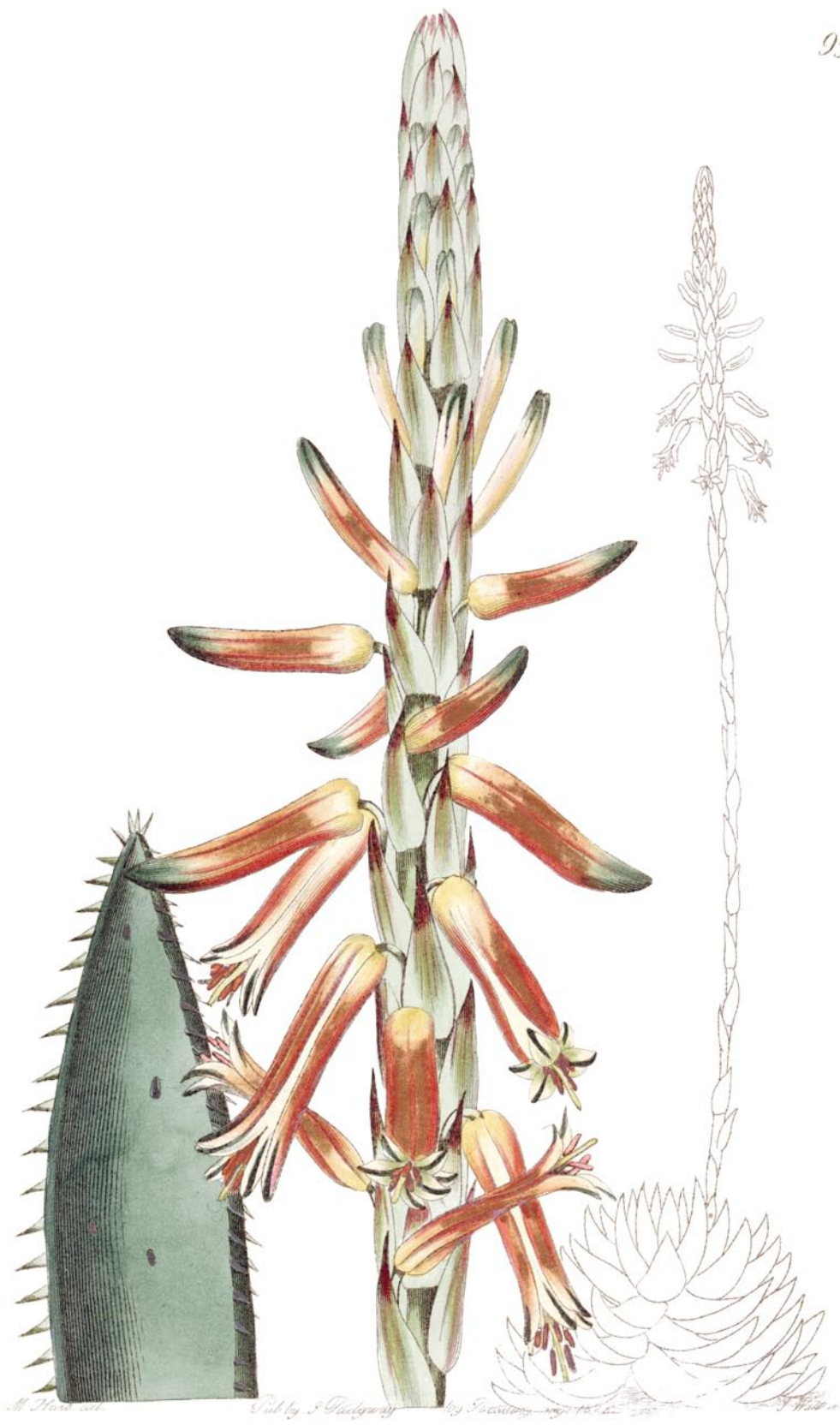
If this species should furnish a fibre capable of being used by the manufacturer, it will then, like the *Maguey*, its near ally, both produce a material from which linen may be woven, and assist in washing it afterwards.

Its cultivation is very simple. When it is in a growing state it should be placed in a temperature a little higher

* Ἀγανός admirable, in allusion to the many useful purposes to which the genus is applicable.

than a common greenhouse. It never requires much water, and in the winter months may be kept nearly dry. The soil used in potting should be fresh loam mixed with a considerable quantity of sand.

When seeds are procured they should be sown in light soil, and placed in a little heat, where they will vegetate freely.



M. Hance. del. *Publ. by J. D. Gleditsia* *by J. Gleditsia* *by J. Gleditsia* *by J. Gleditsia*

ALOE brevifolia.

Lesser proliferous Aloe.

HEXANDRIA MONOGYNIA.

Nat. ord. ASPHODELEÆ.

ALOE Tourn.—*Calyx* fundo nectarifer, 6-fidus aut ferè 6-partitus, laciniis rectis aut revolutis, basi staminiferis. *Stigma* subtrilobum.—Caudex in quibusdam frutescens et foliosus; folià succulenta, imbricata, in pluribus margine et superficie spinosæ; spiccæ axillares aut terminales, interdum ramosæ. Seminis germinantis lobus sessilis appingitur lateri vaginæ primariæ. Juss. gen. 52.

A. *brevifolia*; subacaulis, foliis lanceolatis acutis glaucis: marginibus carinaque apice spinosis vix cartilagineis: subtùs subtuberculatis. *Haworth revis. succ.* 202.

Aloe Africana caulescens foliis glaucis brevissimis. *Comm. præl.* 22.

Aloe brevioribus foliis, &c. *Mill. dict. ed.* 8.

A. prolifera. *Haworth in Linn. trans.* v. 7. 16.

For the synonyms, and what else we can say respecting this plant, we are indebted to Adrian Hardy Haworth, Esq., whose valuable remarks upon the subject we take the liberty of laying before our readers.

“This *Aloe*,” Mr. Haworth informs us, “appears to be the *Aloe prolifera* of my paper in *Linn. Tr.* v. 7. p. 16; and *Aloe brevioribus* (rectius *brevifolia*) of *Mill. Dict. ed.* 8; and, finally, my *Aloe brevifolia*, in *Revis. pl. succ.* p. 202-3.

“My reason for not originally calling it *brevifolia*, in *Linn. Tr. in loco*, was, because another plant was named *A. perfoliata, brevifolia*, by *Solander*, in *Hort. Kew.* v. 1. p. 467; and it was in submission to such authority, that I followed it, but raised *Solander’s* plant to the rank of a species. This last plant, afterwards (from its distant leaves) became the *Aloe distans* of my *Synops. pl. succ.*”

To this we have only to add, that Professor Sprengel considers the *Aloe distans* and *Aloe brevifolia* of Mr. Harworth as the same.

Our drawing was made in Mr. Hood's collection, at South Lambeth.

J. L.



Prof. Edwards del.

P. by J. Polakoff 190. Peradilly. Jan. 1. 1816.

Smith. Sc.

ASCLEPIAS curassavica.

Curassoa Swallow-wort.

PENTANDRIA DIGYNIA.

ASCLEPIAS. *Suprà fol.* 78.

- A. *curassavica*, foliis lanceolatis petiolatis glabris, nitidis, caule simplicis, umbellis erectis solitariis lateralibus. *Linn. sp. pl.* 1. 314.
- Asclepias curassavica. *Mill. dict. ed.* 8. n. 1. *Swartz obs.* 106. *Jacq. miscell.* 1. 22. t. 2. f. 2. *Hort. Kew.* 1. 306. ed. 2. 2. 81. *Willd. sp. pl.* 1. 1266.
- A. erecta, foliis angustis acuminatis verticillater ternatis, floribus umbellatis terminatricibus. *Browne jam.* 183. 2.
- Apocynum radice fibrosa, petalis coccineis, corniculis croceis. *Dill. elth.* 34. t. 30. f. 33.
- A. curassavicum s. americanum, fibrosa radice, floribus aurantiis, Chamænerii foliis latioribus. *Herm. paradis.* 36. t. 36.
- A. erectum folio oblongo flore umbellato petalis coccineis reflexis. *Sloane jam.* 1. 206. t. 129. f. 45.
- A. curassavicum fibrosa radice floribus aurantiis Chamænerii foliis angustioribus. *Pluk. alm.* 36. *Phyt. t.* 138. f. 3.

Radix perennis, fibrosa. Caulis erectus, bipedalis v. magis, teres, viridis, lanugine albâ rarâ obsoletius pubescens. Folia saturatè virentia, distantiùs decussata, lanceolato-oblonga, in petiolum prolixius attenuata, subglabra, nervo medio emittente alios laterales subadscendentes. Pedunculi interpetiolares, ad paria superiora foliorum alterni, solitarii, umbellâ pluriflorâ erectâ laxâ simplici terminati, pedicellis basi bracteolatis. Foliola calycis virentia, lanceolata, acuta, villosiuscula, reflexa, duplo breviora corollâ. Cor. crocato-coccinea, laciniis deflexis, lanceolatis, apice incurvulis. Corona staminea aurantiaco-flavescens, brevis; foliolis medio tubo affixis, cucullatis, obtusissimis, singulis corniculum subulatum super stigma ascendens, & inflexum exsertentibus fundo. Stigma maximum, apice plano depressum. Folliculi fusiformes, subtriunciales, crassitudine digiti.

Grows naturally in the West Indies. In Jamaica it is known by the name of "Wild Ipecacuanha," and is said to be employed by the negroes for the same medicinal purposes for which the genuine Ipecacuanha is used. The seed, buoyed by a silky plume, is wafted far and near like that of our thistles, like that attaches itself to whatever it meets in its course, and separates at last from the plume which has suspended it, to seek the soil and germinate: proving by this habit a troublesome weed. Even in our hothouses, where it seeds freely, an inconvenience is perceived in as far as the other plants are disfigured by the downy seed.

Root fibrous. *Stem*, seldom we believe rising above three feet in height, as well as the foliage of a full deep green. Upon attentive inspection, a whitish pile will be perceived to spread itself more or less over the whole plant, but more copiously on the stem peduncles and calyx. *Umbels* upright, rather numerous but not crowdedly flowered ; *bloom* scarlet and saffron-coloured. Plants of it last with us three or four years, but after the second year become naked, and do not produce so many flowers as at first. So that it is best to keep up a succession of them, which may be easily done by seed. The mould in which they are planted should be rich; the pots kept constantly in the tan-bed, and water supplied very sparingly in the winter.

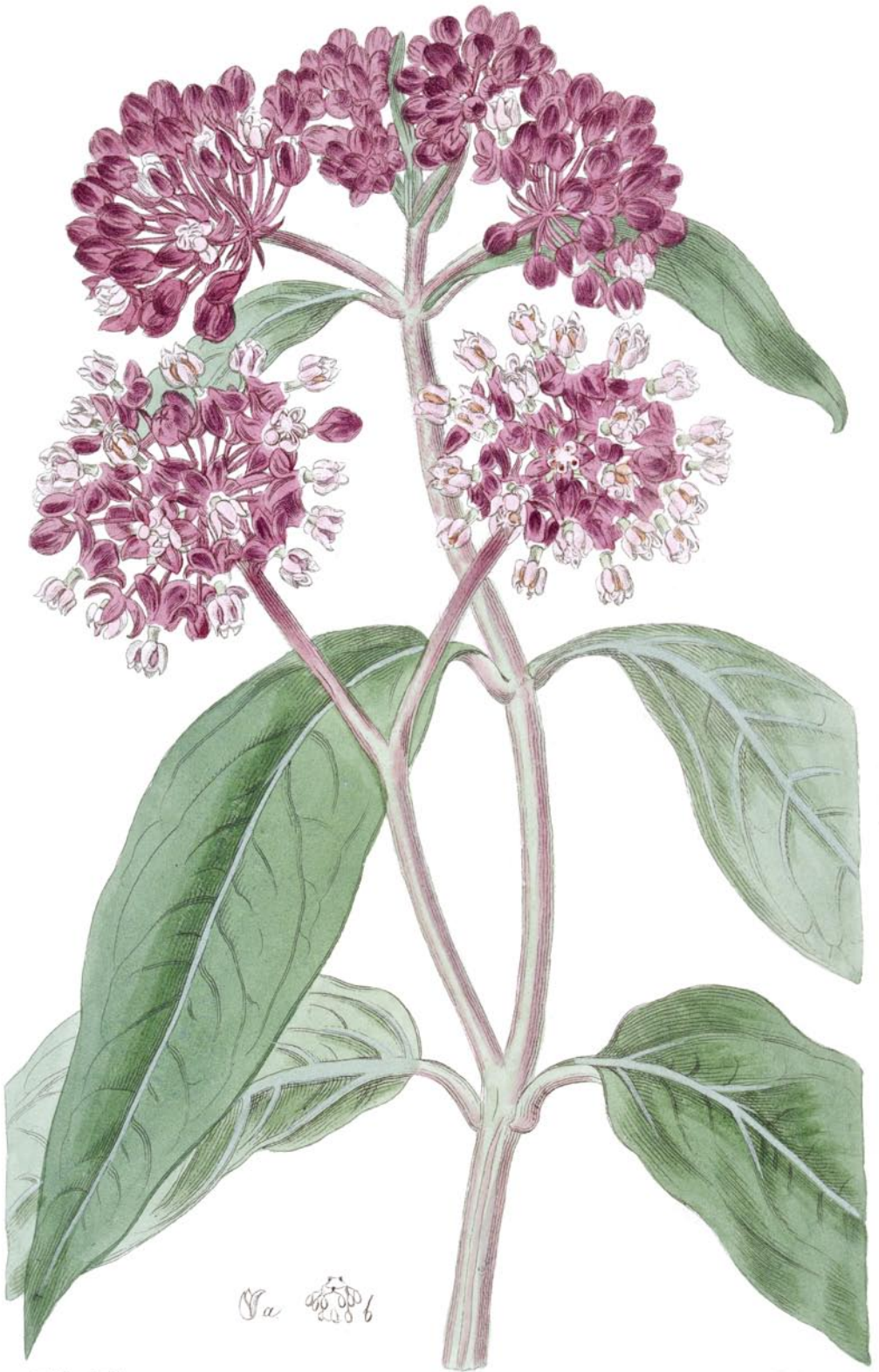
Professor Jacquin, to whom so much is due in the elucidation of the structure and economy of the stamens and pistils of this natural order, has displayed in his *Miscellanea Austriaca* those parts in the flower of this species by very detailed and clear dissections. By these the mode, in which the pollen-masses are taken up from the cells of the anthers and held by the double thread that issues from the corpuscle at each angle of the pentagonal stigma, is well characterized, and reminds us of the way in which a magnet attracts and holds a substance within its influence. They are seen suspended by pairs, like the drops of ear-rings, one at the end of each thread, each lifted from the cell of a different anther.

Cultivated in 1692 in the Hampton Court Garden. Blooms from June to October. Varies with white flowers.

The drawing was made from a specimen with which Mr. Edwards was favored by Lady Aylesford, from her collection at Stanmore.



a The calyx. *b* The centre-piece of the flower deprived of the five cowl-shaped leaflets that form the stameneous crown. *c* One of these leaflets detached. *d* An outline of the unripe follicle or univalvular fruit, in the state it was found on the plant from which the drawing of the flowers was made.



By J. Edwards del.

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White sq. 18. 8. - 1866. J. E.

ASCLEPIAS.

Rose-coloured Swallow-wort, or Water Silkweed.

PENTANDRIA DIGYNIA.

Nat. ord. APOCINÆ. *Jussieu gen.* 143. *Div. II.* Germen duplex. Fructus bifollicularis. Semina papposa.

ASCLEPLADEÆ. *Brown asclep.* 19. *Div. I.* ASCLEPIADEÆ VERÆ.

ASCLEPIAS. *Suprà vol. 1. fol. 76.*

A. *incarnata*, caule erecto supernè ramoso tomentoso, foliis lanceolatis utrinque subtomentoso-lanuginosis, umbellis pluribus origine geminis, corniculis appendicun exsertis. *Pursh amer. sept.* 1. 181.

Asclepias incarnata. *Linn. sp. pl.* 1. 314. *Mill. dict. ed.* 8. n. 9. *Hort. Kew.* 1. 307. *ed.* 2. 82. *Jacq. hort. vindob.* 2. 49. t. 107. *Willd. sp. pl.* 1. 1267. *Mich. bor. amer.* 1. 115.

A. caule erecto ramoso annuo, foliis lanceolatis, umbellis terminalibus erectis plurimis. *Gron. virg. edit.* 1. 27.

Apocynum minus rectum canadense. *Corn. canad.* 9. t. 93. *Barrel. ic.* 72. (β) *pulchra.* *Pursh l. c.*

Asclepias pulchra. *Willd. sp. pl.* 2. 1267. *Bigelow flor. bost.* 63.

Herbacea, perennis. Caulis erectus, purpureo-virescens, foliosus, supernè opposito-ramosus, lanuginosus (v. tomentosus ex P.) subcompressocylindricus, obscurè angulatus v. striatus, infernè glaber, nitens, crassitudine digiti. Folia opposita, distantia, oblonga, lanceolata, semipedalia latitudine plus quàm sesquiunciali, subtus varicoso-nervosa, subrugato-venosa, sublanuginosa, nube conspicuiore ad nervos et venas inque junioribus, basi subovata v. subcordata; petiolis vix $\frac{1}{3}$ unciae longioribus, canaliculatis, basi tomentosis, cæterum lanuginosis. Flores caulis ramorumque terminales, fragrantés, carneo-prurpuascentes: umbellæ plurimæ pluriès, at uno versù dichotomæ, congestoastigiantes inferiores foliis 2, superiores bracteis 2 interpositæ. Pedunculi communes subrubentes, longiores pedicellis, lanuginosi, subbiunciales ad brevissimos, robusti. Involucrum parvum, purpureum, triplo brevius pedicellis, radiatum, modò retroflexum, lanuginosum, foliolis angustissimis subulatis. Umbellæ multiradiatæ, subcapitato-convexæ, pedicellis fine extumido carnosio pedunculi communis undique insertis, 3-plo circitèr longioribus corollâ, lanuginosis, ebracteatis, teretibus, sursùm attenuatis. Cal. extus lanuginosus, rubido-virens, reflexus, plùs duplo brevior corollâ, segmentis ovato-acuminatis v. lanceolatis. Cor. glabra, reflexa, laciniis lanceolato-oblongis, acutis: corona staminea carneo-pallescentis remotè à plano corollæ infra medium columnæ pro $\frac{1}{3}$ longitudinis suæ striato-teretis et paulò inclusæ imposita; foliola cucullata ovato-oblonga orificio obliquo retuso, cornicula alba gracilia super stigma conniventia exserentia.

A hardy species, according to the Hortus Kewensis cultivated with us before 1710. It had been divided into two by Willdenow, which have been justly united again by oth-

er botanists; the chief difference between the plants consisting in the degree of pubescence, which is proved to depend upon circumstances not controlled by the nature of the species. Native of North America; where it is very common in swamps and on the banks of rivers. Flowers in July and August.

An herbaceous perennial plant. Stem upright, purplish green, downy or tomentose, leafy oppositely branched, cylindrical and slightly compressed, obscurely fluted or angular, smooth and shining below, and about the thickness of the finger. *Leaves* opposite, distant, oblong, lanceolate, about half a foot long and more than an inch and half broad, varicosely nerved beneath and somewhat wrinkled, downy, with the pubescence more conspicuous at the nerves and veins, subovate or subcordate at the base; *petioles* short. *Flowers* terminating both stem and branches, of a purplish flesh colour, with a fragrance that seems to have some resemblance to that of the Peruvian Heliotrope: *umbels* numerous, repeatedly dichotomous, crowdedly fastigiant, lower ones placed between two leaves, upper between two bractes. *Common peduncles* reddish, longer than the pedicles, downy, from about two inches long to very short, thickish. *Involucre* small, purple, 3 times shorter than the pedicles of the rays, radiate, sometimes reflectent, downy; *leaflets* very narrow, subulate. *Umbels* many-rayed, nearly as convex as capitula; *pedicles* inserted round about the enlarged fleshy head of the peduncle, about three times as long as the segments of the corolla, downy, round, and tapered upwards. *Calyx* externally downy, reddish green, reflectent, more than twice shorter than the corolla, with ovately acuminate or lanceolate segments. *Corolla* smooth reflectent, segments lanceolately oblong acute: *stamineous crown* of a pale flesh colour, placed at about two thirds below the top of the column, which in the space between that and the plane of the corolla is round and fluted: the *cucullated leaflets* ovately oblong, with a slanting retuse orifice, putting out from their bottom small white slender horns that converge over the stigma.

The drawing was taken at the nursery of Messrs. Whitley, Brames, and Milne, Fulham.



a A leaflet of the stamineous crown. *b* Shows the pollen-masses appended to the stigma.



ASCLEPIAS tuberosa. α .*Tuberous Swallow-wort, or Orange Apocynum.*

PENTANDRIA DIGYNIA.

Nat. Ord. ASCLEPIADEÆ. *Cal.* 5-divisus, persistens. *Cor.* monopetala, hypogyna, regularis, decidua. *Stam.* epipetala, laciniis limbi alternantia. *Anth.* biloculares. *Pollen* ad dehiscentiam antherarum coalescens, in massas numero loculorum. *Germ.* 2. *Styli* 2, arcuè approximati. *Stigma* ambobus commune, dilatatum, pentagonum, angulis corpusculiferis. *Folliculi* 2, altero nunc abortiente. *Placenta* suturæ intus applicita, demum libera. *Sem.* numerosa, imbricata, pendula. *Albumen* tenue.

Div. ASCLEPIADEIE VERDE. *Massæ Pollinis* 10, læves, per paria (diversis antheris pertinentia), affixæ stigmatis corpusculis, sulco longitudinali bipartilibus. *Fil.* connata, exhs sæpius appendiculata.

ASCLEPIAS. *Cor.* 5-partita, reflexa. *Corona staminea* simplex, 5-phylla: foliolis cucullatis, è fundo exserentibus processum aversum corniformem. *Massæ Pollinis* compressæ, apice attenuato affixæ, pendulæ. *Stigma* depressum, muticum. *Folliculi* læves. *Sem.* comosa. *Herbæ erectæ.* Folia opposita, nunc alterna! v. verticillata. *Umbellæ interpetiolares.* Brown asclep. 19, 21, 36; et in Hort. Kew. ed. 2. 2. 80.

A. *tuberosa*, caule erectiusculo summitate divaricato-ramoso hirsutissimo, foliis sparsis oblongo-lanceolatis, umbellis subcorymboso-terminalibus. *Pursh amer. sept.* 1. 183.

Asclepias tuberosa. *Lin. sp. pl.* 1. 316. *Mill. dict. ed.* 8. n. 11. *Hort. Kew.* 1. 309. *ed.* 2. 2. 82. *Michaux bor. amer.* 1. 117. *Willd. sp. pl.* 1. 1273.

Apocynum novæ angliæ hirsutum, tuberosâ radice, floribus aurantiis. *Herm. lugdb.* 646. t. 647. *Dill. elth.* 35. t. 30. f. 34.

(β) caule decumbente foliis sublinearibus hirsutissimis umbellis lateralibus. *Pursh ubi supra* 184.

Asclepias decumbens. *Lin. sp. pl.* 1. 314. *Mill. dict. ed.* 8. n. 10. *Walt. carol.* 106. *Willd. sp. pl.* 1. 1268.

A. *hirsuta* foliis ovatis obtusis subsessilibus, caule decumbente. *Gron. virg.* 27. *ed.* 2. 37.

Aporyaum carolinianum aurantiacum pilosum. *Petiv. sicc.* 90.

Hirsutiùs pubescens, prater corollam. Radix perennis, elongato-tuberosa, crassa, modò profundissima. Caulis sesqui-bipedalis, decumbens vel erectiusculus, divaricato-ramosus. Umbellæ in ramis fusco-rubentibus plures, corymboso-fastigiatae, multiradiatae, in pedunculis communibus secundo-lateralibus & terminalibus, singulis inter folia bina opposita sitis, biuncialibus ad ferè obsoletos: pedicelli 1-flori, flore subtriplo longiores. Folia supra pro majore vel minore spatio opposita, deindè sparsa; inferiora elongato-oblonga acumine ferè obsoleto, basi minimum attenuata, v. subcordata; petioli breves. Flores aurantiaco-crocati, vix quartam unciae partem excedentes. *Cal.* corollâ 3-plo brevior, foliola lanceolata. *Corona* stam. obtusa, corollæ lacinias æquans.

A plant very generally native in most of the states of America, where it goes by several denominations; such as “Butterfly-weed,” from being a favourite resort of the insects of that tribe; “Pleurisy or Ache-in-the-side plant,” from its medicinal virtues, said to be of considerable activity; besides some others.

The stem varies in its direction, being sometimes decumbent, sometimes nearly upright, and unites in itself, in a greater or less degree, both the opposite and alternate habit of foliage; circumstances not ascertained by its first historians, and which have caused the separation of the two varieties into as many species. A greater or less proportion of the upper leaves are always opposite, the rest scattered.

Mr. Pursh mentioned to us, that he had found it growing on mounds of sand which had been gradually accumulated by the wind to a considerable height, having a root which descended to near two fathom in depth: that in such situations the stem was decumbent; in sheltered fertile ones generally upright. The leaves vary from three inches long and nearly one broad, to very narrow; from oblong, to lanceolately attenuate, and to linear. The stem from one to two feet high, or more.

The name of “Swallow-wort” takes its rise with the european officinal species (*ASCLEPIAS Vincetoxicum*); and seems to be a version of *Hirundinaria*, the denomination that plant appears under in most of the works of the old botanists; to whom the name was suggested by a visionary assimilation of the fruit-vessel with its plumed seed, to a Swallow on the wing.

Generally raised from imported seed. Requires to be placed in a warm, dry, sheltered border of light mould. When its tuberous root has become large, it does not bear transplanting well. Sometimes seeds with us.

Cultivated in 1690 in the garden at Hampton Court. Blooms from July to September.

The drawing was made at Messrs. Colville’s nursery, King’s Road, Little Chelsea.



a The calyx. *b* The stameneous tube surmounted by the stigma, the crown being removed. *c* A leaflet of the stameneous crown, with its horn-shaped process.



BILLBERGIA iridifolia.

Drooping Billbergia.

 HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

BILLBERGIA Thunb.—Calyx superus, 3-partitus, unibracteatus. *Petala* 3, sepalis longiora, in tubo convoluta, basi squamis appendiculata. *Stamina* 6, libera, basibus sepalorum et petalorum inter squamas inserta. *Ovarium* 3-loculare polyspermum: ovulis minutissimis. *Stylus* filiformis. *Stigmata* tria, linearia, convoluta. *Capsula* baccata? *Semina* (ex Martio) nuda.—*Herbæ epiphytæ* (*Americæ æquinoctialis*) foliis *siccis lepidotis*. Flores *sessiles, nunc spicati, nunc paniculati, cum rachi manifesto articulati*.

B. *iridifolia*; foliis lanceolato-ensiformibus undulatis acuminatis subspinosiis, spica pendula multiflora, floribus solitariis, bracteis integerrimis coloratis florum longitudine.

Bromelia iridifolia. Nees et Martius in nov. act. phys. med. Ac. Cæs.-Leop.-Car. nat. cur. vol. xi. p. 16.

Folia suprema $1\frac{1}{2}$ pedalia, lanceolato-ensiformia, undulata, basibus vaginantibus præsertim spinosa; atro-viridia, infernè purpurea. Scapus terminalis, foliis paulò brevior, corallinus, verosimiliter semper pendulus, bracteis roseis inflatis vestitus. Flores spicati, distantes, solitarii, in rachi angulatâ, flexuosâ sessiles, bracteis coccineis integerrimis ejusdem longitudinis inclusi. Calyx superus, 3-phyllus, sepalis ovatis, luteo-viridibus, apice caruleis, planis, membranaceis, corollâ duplò brevioribus. Petala 3, linearia, in tubo convoluta, luteo-viridia, apice carulea, obtusa, revoluta; basi squamis duabus cucullatis fimbriatis, nectariferis. Stamina 6, basi sepalorum et petalorum inter squamas inserta. Filamenta filiformia. Antheræ versatiles, liberæ. Ovarium inferum, 3-gonum, glaberrimum, 3-loculare, loculis polyspermis, ovulis minutissimis.

For this truly noble plant we have to render our acknowledgments to Mrs. Arnold Harrison, by whom specimens and a sketch were most obligingly sent us in March last, from her rich collection at Aighburgh, near Liverpool. The plant had been received from William Harrison, Esq., of Rio Janeiro, where it is found growing on trees. We

have subsequently observed the species in flower among a collection of parasitical plants from Rio Janeiro, presented to the Horticultural Society by Henry Chamberlayne, Esq.

In their native country the seeds of these plants take root upon the branches of trees, or upon stones covered with decomposed vegetable matter, but always in situations where the atmosphere is highly charged with humidity, and where the temperature varies from 70° to 90° of Fahrenheit. Such, therefore, are the conditions to which Epiphytes must be submitted if we would hope to cultivate them successfully in these latitudes. The modes of creating an artificial climate of this description will so readily suggest themselves to the cultivator, that detailed directions for the purpose are quite unnecessary.

It would be difficult to point out a family of plants more interesting from their beauty or singularity than that of Bromeliaceæ, and of which, notwithstanding, the systematic arrangement has been less carefully studied. We long ago suggested the necessity of restoring the abolished genus *Ananassa*, for the eatable Pine-Apples, and of restricting the idea of *Bromelia* to the species of which *Bromelia Pinguin* may be considered the representative. We now venture to propose the adoption of the genus *Billbergia* of Thunberg for such of the species still included in *Bromelia* as agree with *Ananassa* in the presence of nectariferous glands at the base of the petals, and as therefore differ from *B. Pinguin* and its kindred in that character, and also in their linear convolute stigmas. At the same time, a synopsis of what we consider the essential characters of the genuine genera of the order may not be unacceptable.

I. *ANANASSA*; (*Ananas* Plum.)—*Spica* concreta, carnosa. *Calyx* superus. *Petala* 3, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* 3, recta, carnosa. *Bacca*. *Semina* nuda, subrotunda.

Ananassa, 1. *sativa* Nob. 2. *lucida* Nob. (King-Pine.) 3. *debilis* Nob. (the Waved-leaved Pine.) 4. *bracteata* Nob. (Scarlet-leaved Brazilian Pine.)

II. *BROMELIA*.—*Calyx* superus. *Petala* convoluta, basinuda. *Stamina* basi perianthii inserta. *Stylus* nanus. *Stigmata* carnosa, abbreviata. *Bacca*. *Semina* nuda (subrotunda?)

B. Pinguin Jacq.—*fastuosa* Lindl.—*sylvestris* Swtz. and many others; probably also *B. exudans* of the Botanical Cabinet, tab. 801.

III. BILLBERGIA *Thunb.*—*Calyx* superus. *Petala* convoluta, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula* baccata? *Semina* nuda.

I. *B. amœna*, (*Bromelia pallida*, *suprà*, fol. 344. *Tillandsia amœna*, *Bot. cab.* 76. *Billbergia speciosa*, *Thunb. plant. Brasil.* p. 30. c. *icone.*) —2. *B. iridifolia*.—3. *B. pyramidalis*, (*Bromelia nudicaulis*, *suprà*, fol. 203. *B. pyramidalis*, *Bot. mag.* 1732.)—4. *B. nudicaulis*, (*Bromelia nudicaulis*, *Exot. Fl.* 143.)—5. *B. clavata*, (*Bromelia melanantha*, *suprà*, fol. 766.)—6. *B. zebrina*, (*Bromelia zebrina*, *Bot. mag.* 2686.)

IV. ÆCHMEA *Fl. Per.*—*Bractea* 3, in cyatho connatæ. *Calyx* superus. *Petala* convoluta, distincta, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula* baccata. *Semina* nuda.

Æchmea paniculata *Fl. Per.*

V. POURRETIA *Fl. Per.*—*Calyx* inferus. *Petala* convoluta, distincta, basi nuda. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula*. *Semina* alata.

Pourretia lanuginosa *Fl. Per.* etc.

VI. PITCAIRNIA *L'Hérit.*—*Calyx* semisuperus. *Petala* libera, irregularia, basi squamosa. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula*. *Semina* caudata.

Pitcairnia latifolia, etc.

VII. GUZMANNIA *Fl. Per.*—*Calyx* inferus convolutus. *Petala* convoluta, ungue membranaceo, basi nuda. *Stamina* basi perianthii inserta. *Antheræ* connatæ. *Stylus* filiformis. *Stigmata* linearia, convoluta. *Capsula*. *Semina*....

Guzmannia tricolor *Fl. Per.*

VIII. BONAPARTEA *Fl. Per.* (*Acanthospora* *Spr.*)—*Calyx* inferus, diphyllus, sepalo altero majore bifido. *Petala* 3, convoluta, basi nuda. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* linearia, convoluta? *Capsula*. *Semina* caudata.

Bonaparteia juncea and *strobilantha* *Fl. Per.*

IX. TILLANDSIA.—*Calyx* inferus. *Petala* convoluta, distincta, basi nuda. *Stamina* basi perianthii inserta. *Stylus* filiformis. *Stigmata* recta, abbreviata. *Capsula*. *Semina* papposa.

1. §. *Stigmata* simplicia.

Tillandsia maculata *Fl. Per.*; *parviflora* *Fl. Per.*; *pulchra* *Ex. Fl.* 154.;
? *bulbosa* *Ex. Fl.* 173.

2. §. *Stigmata* apice dilatata.

Tillandsia tenuifolia *Jacq.*; from which *T. aloifolia* of our friend
Professor Hooker is surely not different.

X. CARAGUATA *Pl.*—*Calyx* inferus. *Petala* in tubo connata. *Stamina* tubo adnata. *Stylus* filiformis. *Stigmata* obtusa, recta? *Capsula*. *Semina* caudata. (*Char. ex Jacq.*)

Caraguata lingulata. (*Tillandsia lingulata* *Jacq.*)

XI. †XEROPHYTA *Juss.*
XII. RADDIA *Ach. Rich.* (*Campteria* *id*) } appear to be closely allied to
Vellozia, and should possibly
be excluded from this order.

J. L.



BILLBERGIA* pyramidális; var. bicolor.

Two-coloured Pyramidal Billbergia.



HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ

BILLBERGIA.—*Suprà*, vol. 13. fol. 1068. /

B. *pyramidalis*; caule erecto: bracteis magnis spathaceis coloratis, spicâ subcapitatâ ebracteata.

Billbergia *pyramidalis*. *Lindl. suprà*, vol. 3. fol. 1068, in notâ.

Bromelia *nudicaulis*. *Suprà* vol. 3. fol. 2 .

Bromelia *pyramidalis*. *Bot. mag.* 1732.

β. *bicolor*; petalis obtusis bicoloribus, foliis magis acuminatis.

This appears to be a variety distinct from that represented at fol. 203 of this work, from which it differs in the more obtuse figure of the petals, and in their colour; the leaves also appear to be more taper-pointed.

It is a native of some part of South America, and highly deserving of cultivation on account of the great beauty of its flowers.

Our drawing was made in April 1827, in a stove in the Nursery of Mr. Samuel Brookes, of Ball's Pond, Islington.

J. L.

* Named by Thunberg after Gustavus John Billberg, a Swedish Botanist, whom he calls "Botanicus longè celeberrimus, Flore Suecicæ elegantissimæ Auctor meritissimus."



BRACHYSTELMA spatulatum.

Spatulate-leaved Brachystelma.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ.*BRACHYSTELMA. Suprà, vol. 9. fol. 722.*

B. spatulatum; foliis spatulatis obtusis, corollæ laciniis tubo duplò longioribus.

Tuber subrotundum. Caulis erectus, simpliciusculus, pedalis, teres, carnosus, pilosus. Folia spatulato-oblonga, in petiolo attenuata, obtusa, subrepanda, pilosa, 2 uncias longa, inferioribus brevioribus, oblongis. Pedunculi solitarii, filiformes, pilosi, foliis dimidio breviores. Sepala subulata, æqualia, pilosa. Corolla campanulata, sordide purpurea, punctata, laciniis caudatis, erectis, intùs tomentosis, tubo duplò longioribus.

For this addition to the genus *Brachystelma* we are indebted to the late Alexander George Mackay, Esq., by whom it was imported from the Cape of Good Hope, in 1826.

To be grown in perfection it should be planted in old rubbish, and kept in a hot, dry stove, where it will flower readily in the months of June and July. After flowering, the stems will die down; the pots should then be removed to a place where they may be kept free from damp, until the ensuing spring.

Tuber roundish. *Stem* erect, nearly simple, about a foot high, terete, fleshy, pilose. *Leaves* spatulate-oblong, tapering into the petiole, obtuse, somewhat repand, pilose, about two inches long; the lower shorter and oblong. *Peduncles* solitary, filiform, pilose, half the length of the leaves. *Sepals* subulate, equal, pilose. *Corolla* campanulate, dull purple, dotted, with caudate, erect segments, downy in the inside, and twice as long as the tube.

J. L



BRACHYSTELMA tuberosum.

Cape Brachystelma.

PENTANDRIA DIGYNIA.

*Nat. ord. ASCLEPIADEÆ. Brown in Wern. trans. Edin. 1. 12. prod. 1. 458.**BRACHYSTELMA. Corolla* campanulata, sinubus angulatis. *Columna* inclusa. *Corona* monophylla, quinquefida: lobis antheris oppositis, dorso simplicibus. *Antheræ* absque membranâ apiculari. *Massæ pollinis* erectæ, basi insertæ. *Brown in Curtis's magaz. 2343.**Brachystelma tuberosum. Brown 1. c.**Stapelia tuberosa. Meerb. ic. t. 54. fig. 1.*

Tuber rotundum. Caulis suffruticens, ramosus; rami teretes, villosi. Folia opposita, membranacea, lineari-lanceolata, concava, margine et carinâ ciliatis. Flores semiverticillato-aggregati in quoque fasciculo 3-4 magnitudine ferè STAPELIÆ reclinatæ, cernui, pedunculati. Calyx 6-fidus, acutus, corollæ tubo brevior, ut et pedunculus brevè glandulosèque pubescens. Corolla extûs virescens, rubro-punctata; intûs nigro-purpurea, disco flavo transversè interruptèque lineato; tubo campanulato; limbo quinquepartito, laciniarum margine revoluti, basi fimbriata. Corona 5-fida; lobulis conniventibus, triangularibus. Flores uti STAPELIÆ species ferè cuncto odore fætent nauseabundo.

Native of the Cape of Good Hope. Drawn at Mr. Colvill's Nursery.

A new asclepiadeous genus from the pen of the able reformer of that natural order. Every one will be struck by the *primâ facie* resemblance it bears to STAPELIA.

“*Corolla* campanulate, with angular sinuses. *Column* inclosed. *Crown* 1-leaved, 5-cleft: lobes opposite to the anthers, unappendaged at the back. *Anthers* without the membranous apex. *Pollen masses* upright, inserted by their base.

“*Tuber* round. *Stem* subshrubby, branching; *branches* round, villous. *Leaves* opposite, membranous, linearly lanceolate, concave, ciliate at the edge and keel. *Flowers* partly collected in whorls with three or four flowers in each branch nearly of the size of those of STAPELIA *reclinata*, cernuous, peduncled. *Calyx* 5-cleft, pointed, shorter than the tube of the corolla, and like the peduncle shortly

and glandularly pubescent. *Corolla* greenish on the outside, dotted with red; inside black-purple, centre deep yellow with broken cross lines; *tube* campanulate; *limb* 5-parted, edges of the segments revolute, fringed at the base. *Crown* 5-cleft, with converging triangular lobules. The flowers, like those of nearly all the STAPELIAS, emit a nauseous stench.”



BROMELIA melanantha.

Black-flowered Bromelia.

 HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIÆ. Jussieu gen. 49. Div. II. Germen inferum.
 BROMELIA. Suprà vol. 3. 203.

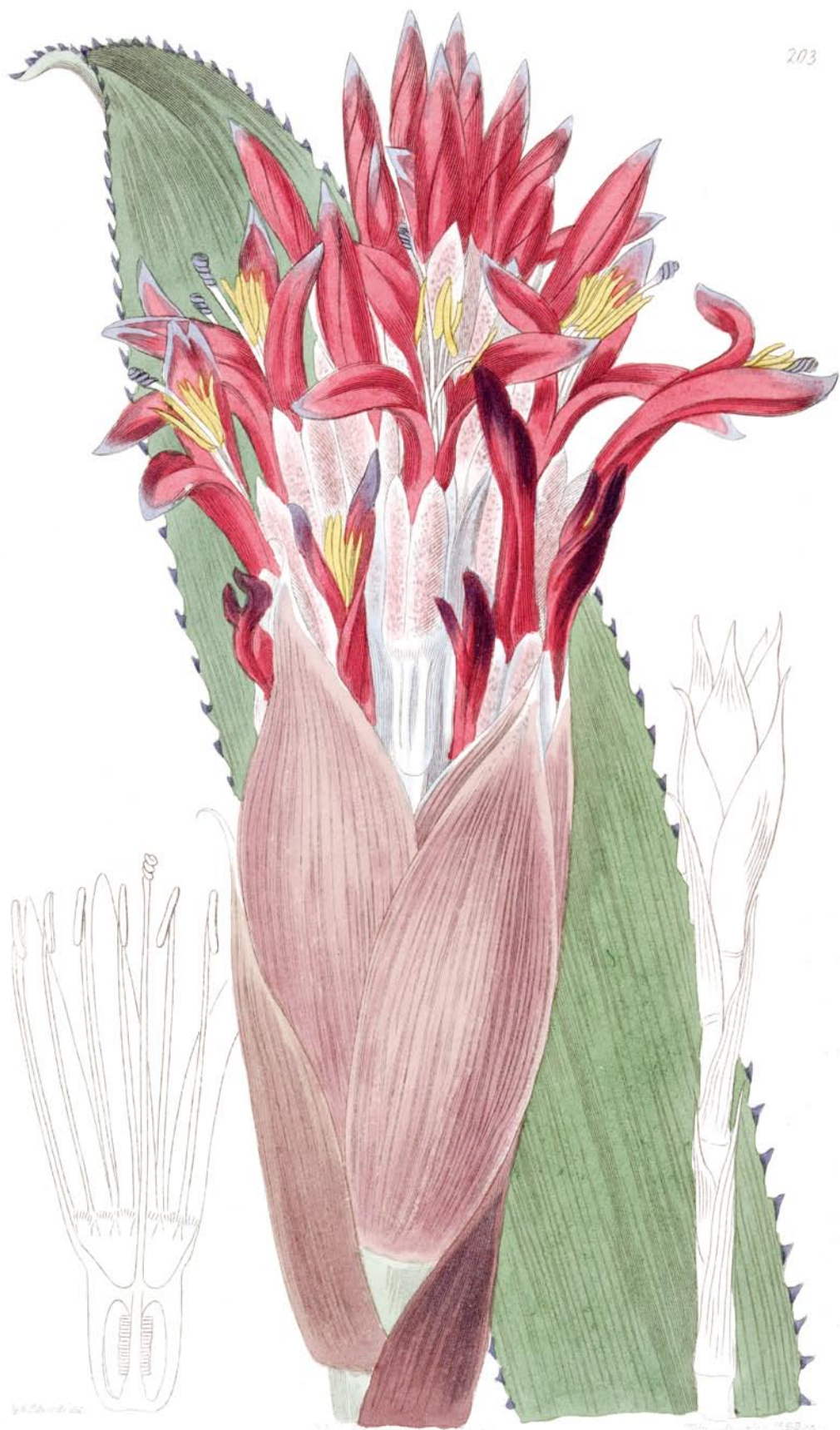
B. *melanantha*, ebracteata? foliis ligulato-oblongis cæsiis spina nigrâ ciliatis cuspidato-obtusis, spica obeso-strobiliformi hexasticha? distantè laxata, verticillis trifloris alternis, floribus rigidis fundo lana immerso, calyce trialato.

Fol. plurima, radicalia, ambientia, alterna, ligulato-oblonga, pedalia v. ultra, uncias plusquam 2 lata, cæsia, leviùs involuta, obtusa, cum spinâ terminali lateralibus grandiore, spinis nigris cartilagineis sursum incurves- centibus ciliata, subtùs e squamulis furfuraceis configuis argenteis catecatim lineata, inferno imbricato-fasciculata et intùs obsolete purpurascentia, exteriora sæpè plus minus revoluta, interiora rectiora gradatim internè versus altiora, per spicam superata. Scapus simplex, cylindraceus pennam olorinam crassitudine vix excedens, centralis, foliis æqualis, albo-lanatus, bracteis sparsis spathaceis sterilibus melinis arido-membranaceis tenuibus saturatiùs nervosis elongato-lanceolatis subtilissimè acuminatis distantè imbricantibus erectis floribus tenùs vestitus, erectus, cum spica clavato-continuus. Spica ebracteata? strobiliformis oblonga obtusa (biuncialis v. magis?) duplo ferè pollice crassior, distanter hexasticha? lanata: floribus porrectis sessilibus obesis subsemiuncialibus, per trinos? ordine laxo verticillatis, respectu serici sextuplici alternantibus. Germ. breve cum calyce isoperimetrum, scariosum, viride, diaphanum, triptero-molendinaceum (v. cylindraceum exque angulis inaciim attenuatis trialatum) venosum venis obscurioribus basin versùs reticulatim anastomozantibus, supernè albo-lanatum, polyspermum, ovulis ordine plurali sursum imbricatis opacis ovato-oblongis, e strophiolâ crassâ succulentâ diaphanâ subclavatâ intimo loculorum angulo affixis. Cal. germinis continuum pallidè virens triphyllum rotundatè 3-gonum, foliolis crassis duro-carnosis in tubum brevem conniventibus à lateribus alto imbricatis, foris albo-lanuginosis. Petala 3, atropurpurea, rigida, recta, erecto-convergentia calyce $\frac{1}{3}$ parte præpropterve longiora, laminâ lineari-oblonga involuto-concava apice truncatè retusa erosula, ungue breviorè lato intùs fimbriâ crispa transversa concolori coronata. Stamina inclusa erecta, alterna 3 breviora summo petalorum ungui inserta filamentis quam anthera plurimùm brevioribus, reliqua 3 carnosio calycis disco vel germinis incrassato cacumini insertæ filamentis longioribus gracilioribus corollæ æqualibus: antheræ lineari-elongatæ pallidæ introrsæ, erectæ, mobiles, summo puncto filamenti supernè attenuati à dorso medio appensæ. Stylus inclusus, erectus, colore filamentorum simili: stigma 3 lobiformia dilatata, brevia, in unum cortorquenda.

We were supplied with the plant for our drawing by Mr. Lambert, who received the seed of it from Trinidad.

Leaves many, radical, surrounding the crown of the roots in alternate order, ligularly oblong, a foot or more high, and more than two inches broad, blueish grey, slightly involute, obtuse, with a largish terminal spine, black like the others at the edge, which are cartilaginous, bowed up-

wards, and smaller, covered underneath with narrow close-set silvery white lines formed of minute scurfy scales, imbricately fascicled below and faintly purple at the inner side, outer ones generally more or less revolute, inner ones straighter, gradually higher, but all are overtopped by the flower-spike. *Scape* simple, cylindrical, scarcely thicker than the tube of a swan-quill, central, even with the leaves, white and woolly, upright, forming a club with the inflorescence, beset on all sides quite up to the spike by thin light brown membranous darker-nerved spathe-like longly lanceolate finely tapered loosely imbricated wideset flowerless bractes. *Spike* strobiliform, oblong, obtuse (two inches long or more ?), twice the diameter of a man's thumb, disposed in six? widish-set rows, woolly: *flowers* bracteless? sessile, projecting, about half an inch long, tubular, loosely arranged in whorls of threes, alternate in relation to a six-ranked order, immersed at the base in the wool of the scape. *Germen* short, with nearly the same circumference as the calyx, scariose, green, transparent, cylindrical, with three short vertical wings formed by its compressed taper-edged angles, marked with darker veins reticulately confluent at the base, many-seeded, white-woolled at the upper part; *ovules* in several-fold order, imbricated upwards, ovately oblong, fixed to the inner corners of the cell by a somewhat clubbed diaphanous thick succulent strophiola or umbilical pedicle. *Calyx* continuous with the germen, pale green, roundly three-cornered; *leaflets* three, thick, hard, fleshy, converging into a short tube and deeply imbricated at their sides, downy white on the outside. *Petals* 3, of a black purple colour, stiff, straight, erectly convergent, about a third longer than the calyx, with a linearly oblong involutely hollowed *lamina* truncately retuse and eroded at the top, and a broad short *unguis* of the same colour and crowned across the top on the inside by a curled fringe of the same colour. *Stamens* enclosed, upright, three alternate ones shorter, with *filaments* much shorter than the anther, and inserted at the top of the unguis, the three others with slenderer longer *filaments* inserted at the thickened summit of the germen: *anthers* linearly long, pale, turned inwards, upright, moveable, suspended by their back to the fine pointed top of the filament. *Style* upright, enclosed, of the colour of the filaments: *stigmata* three, widened into a lobular form, short, sooner or later united by twisting.



BROMELIA nudicaulis.

Scarlet Bromelia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIÆ. Jussieu gen. 49. Div. II. Germen inferum.

BROMELIA. Cal. et Cor. tubulosi, ille brevior (firmior) trifidus, hæc longior tripetalo-partita (tenerior) laciniis ungue appendiculatis. Stamina imo (Jussæo malè summo) calyci inserta, aut glandulæ calycinæ supra germen productæ (indè quasi epigyna?). Bacca umbilicata polysperma. Plantæ herbacæ, quadam parasiticæ; folia radicalia canaliculata, marginibus sæpè dentato-spinosis; flores Bromeliæ Plum. in scapo vel caule laxè spicati aut paniculati, fructibus vix baccatis; flores Karatæ Plum. densè corymbosi, corymbo radicali, baccis ovatis; flores Ananassæ Plum. densè spicati in scapo suprâ folioso, spicâ maturescente strobiliformi carnosâ squamosâ eduli, è coadunatis concreta baccis, vix loculosis et malè fæcundis. Jussieu gen. 50.

B. nudicaulis; caule simplici spathaceo-bracteato; spica cylindracea, ebracteata, laxiùs imbricata.

Bromelia nudicaulis. Linn. sp. pl. 1. 409. Willd. sp. pl. 2. 9.

Bromelia pyramidalis. Curtis's magaz. 1732.

Bromelia pyramidata, aculeis nigris. Plum. nov. gen. 46. Ic. 51. tab. 62.

Caudex nucleus brevis basi stoloniferus. Folia multifaria, infernè se invicem convoluto-complectentia, indè divergentia, lorito-lanceolata cuspidata glabra basi purpurascentia margine dentato-spinosa dentibus ustulato-nigricantibus, longiora 14-15-uncialia latitudine parum infra triuncialem. Caulis simplex, subsesquipedatis, strictus, crassitudine digiti, subflexuosus, albo-farinosus, cylindraceus, tectus bracteis erectis spathaceis sparsim imbricantibus semiamplexicaulibus membranosis obsoletè rubidis lanceolatis 3-4-uncialibus, superioribus latioribus confertioribus integerrimis spicam partim comprehendentibus. Spica terminalis, simplex, sparsa, cylindrica, imbricato-multiflora, erecta, semipedalis ultràve, ebracteata, pedunculus copiosè farinosus albus strictus carnosus pro sedibus florum undique emarginatus. Flores erecti, sessiles, 2 uncias cum dimidio longi, coccinei apice violacei, inodori. Cal. corollæ concolor farinâ alba opacatus, 3-partitus, crassus, rigens, imbricato-tubulosus, in fundo nectariferus, plus quàm duplo brevior corollâ cui arcè adaptatur; segmentis æqualibus, oblongis, obtusulis. Cor. biuncialis, tripetaloidæa, fundo calycis alternè cum segmentis imposita, tubuloso-convoluta, suprâ brevè patula; lacinix subpandurato-ligulatæ, acuminatæ, infra medium intra latera liris membranosis (squamarum continuationibus) 2 longitudinalibus filamenta intercipientibus sulcatæ. Squamæ 6 convexæ cum filamentis alternæ, membranosæ, imo calyci a parte concavâ affixæ, margine lacinulatæ, sertulum aquabile eficientes. Stam. æqualia, inclusa, erecta: fil. inserta basi calycis, alba, filiormia: antheræ luteæ, versatiles, obliquè incumbentes, lineari-sagittatæ, latere utroque dehiscentes. Germ. album, farinosum, hexagono-cylindraceum, 3plo brevius corollâ, calyce parùm angustius: ovula numerosa angulis internis loculamentorum ordine congesto multiplici appacta, ovato-rostrata: stylus albus, tristriato-fliformis, non excedens corollam, neque crassior filamentis: stigmata 3, violacea, in unum spirale oblongum contorta.

The germen being here completely inferior, affords the technical distinction which separates the genus from its next coordinates, *TILLANDSIA* and *PITCAIRNIA*, where that is either partly or else wholly superior. In *BROMELIA* the germen ripens into a more or less fleshy succulent pericarp, which not opening by valves, falls within the definition of a berry. In the well-known species *Ananas*, it is a concreted cluster, or rather spike of these berries (in that instance supremely succulent and generally seedless), horizontally imbedded with the bractes in their common harder fleshed peduncle or stalk, the core of the mass, which compounds the Pine-Apple. In *nudicaulis* the berries are thinner fleshed, scarcely succulent, do not coalesce, and are not esculent; the bloom alone giving a value to the plant in the garden.

Caudex a short stoloniferous axis. *Leaves* radical, growing much as in the common Pine-Apple plant, convolutely folded and imbricated at the base, where they are stained on the inside with purple, divergent, lorately lanceolate, cuspidate, smooth, spinously dentate with teeth of a burnt-black colour, outer ones largest, from 12 to 15 inches in length, and little more than three in breadth. *Stem* simple, about a foot and a half high, upright, of about the thickness of a finger, very slightly flexuose, covered with a white mealy efflorescence, cylindrical, sheathed by large single upright scattered imbricating spathe-like *bractes* of a dull pink colour half stemclasping; membranous, lanceolate 3-4 inches long, upper ones broadest, closest, quite entire, and envelopping the lower part of the inflorescence. *Spike* terminal, simple, scattered, cylindrical, imbricately many-flowered, upright, half a foot or more in length, bracteless: *stalk* or *peduncle* mealy white, fleshy, rigid, cut into niches to hold the flowers. *Flowers* upright, sessile, about two inches and a half long, scarlet, with a violet-blue stain at the end of the segments of the corolla, scentless. *Calyx* nearly of the colour of the corolla, powdered with white meal, 3-parted, thick, hard, imbricately tubular, twice shorter than the corolla, which it envelops closely, filled with a honeyed lymph in the bottom; segments equal, oblong, somewhat obtuse. *Corolla* two inches long, of three petal-like segments, placed alternately with those of the calyx at the base of that, tubularly convoluted, slightly spread above: segments subpanduriformly ligulate, acuminate, be-

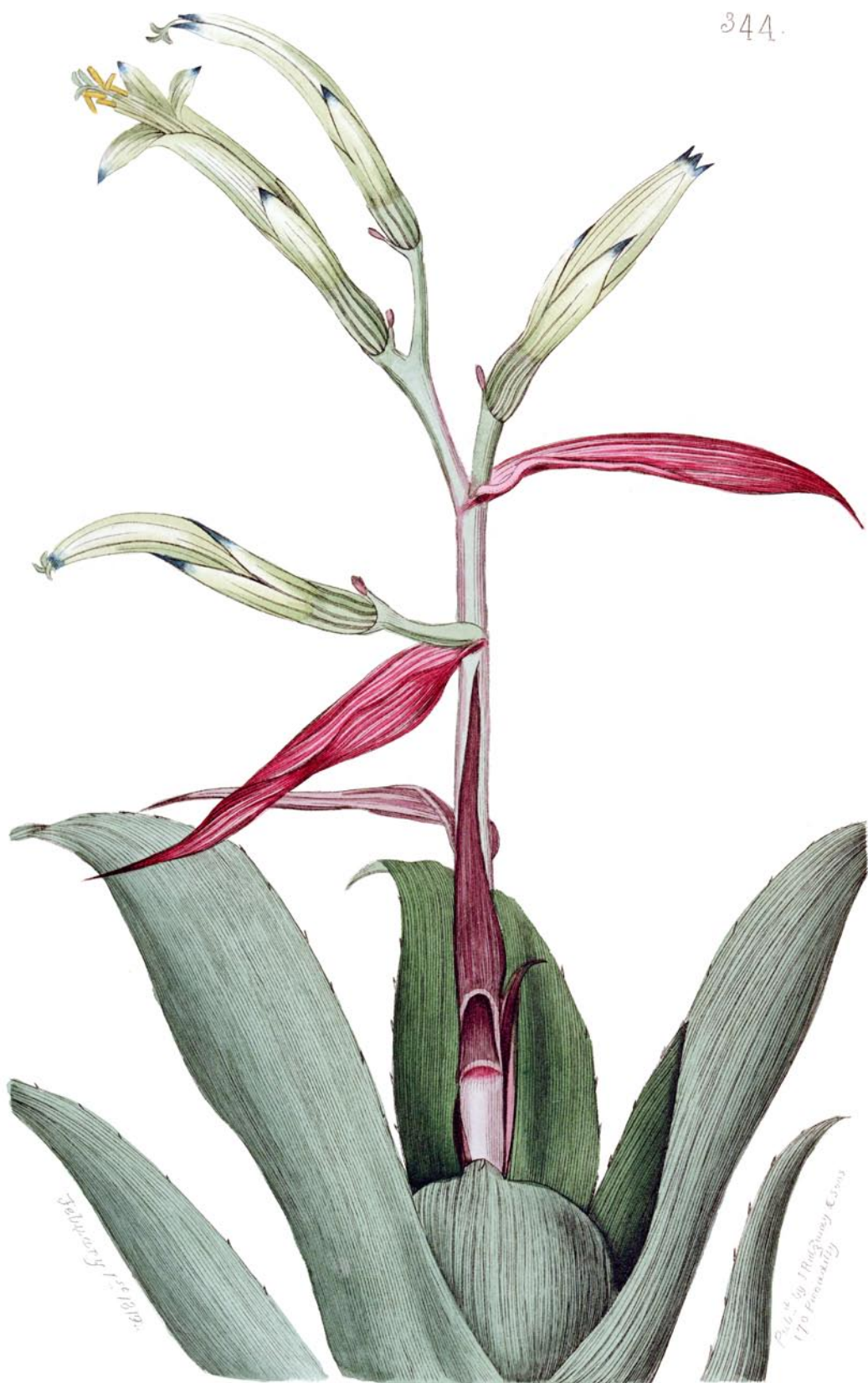
low the middle within the sides divided longitudinally by two membranous ridges in the grooves between which the filaments are placed. *Scales* 6, convex, alternate with the filaments, membranous, affixed circularly to the lowest part of the interior of the calyx by their concave side, jagged at the rim. *Stamens* equal, enclosed, upright: filaments inserted at the bottom of the calyx, white, filiform: *anthers* yellow, veering, slantingly incumbent, linear-sagittate, opening on each side. *Germen* white, mealy, cylindrical, hexagonal, 3 times shorter than the corolla, of a circumference little less than that of the calyx: *ovules* numerous placed in crowded multiplied rows along the corners of the loculaments, ovate, beaked: *style* white, filiform with three streaks, higher than stamens, but not overtopping the corolla, nor thicker than the filaments: *stigmas* 3, twined into an oblong spiral one, of a violet-blue colour.

A native of the Brazils. Introduced about three or four years ago from Rio Janeiro by Mr. Rose; and cultivated in his hothouse at Cuffnells in Hampshire. It requires to be kept in the bark-bed, where it flowers in March and April. Puts out numerous suckers, by which it is easily multiplied. Like the rest of its kindred, the leaves retain water in considerable quantity in the folds at their bases. Mr. Edwards was favoured with the specimen from which the drawing was made by the Duchess of Athol, on whose application to Mr. Rose he was supplied with one of the largest outer leaves, which illustrate the character attributed by Plumier to the spines at the margin, and which is not so perceptible in the inner ones. Differs from all its congeners that we are acquainted with, in having an entirely bracteless inflorescence.



A diminished outline of the flower-stem below the spike.

The flower opened vertically, on a vertical section of its germen.



February 1st 1872.

Painted by H. R. G. & Sons
179 Piccadilly

BROMELIA pallida.
Pale-flowered Bromelia.

—◆—
HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIÆ. *Jussieu gen.* 49. *Div. II.* Germen inferum.
BROMELIA. Suprà vol. 3. fl. 203.

B. pallida, paniculâ laxissimâ, patentissimâ, pauciflorâ, pedunculis 2- (*in nostrâ plantâ abortû* 1-) floris; spathis supremis fertilibus, florem æquantibus, divaricatis.

Fol. multifariâ ambientia, erccto-divergentia, coriaceo-firma, lanceolato-lorata acumine brevi, remotiùs spinuloso-ciliata, convoluto-concava, longiora spithamæa v. ultrâ. Caulis erectus, dodrantalis v. ultrâ, teres simplex, spathaceo-vaginat: spathæ singulares, sparsæ, sphacelato-membranosæ, involuto-lanceolatæ, acuminatæ, inferiores fuscæ, imbricato-erectæ, superiores longiores, divaricatæ, vividè puniceæ. Ramuli v. pedunculi subangulosi, distantes, sparsi, crassi, patentes, margine anteriori in bracteis 2 obsolete producti, inferiores in spathis axillares, superiores nudi, 3-plo breviores flore v. ultrâ. Flores tubulosi subbiunciales, diametro circitèr pennæ scriptoriæ vulgaris, chloroleuci apicibus livido-cærulescentibus, summitate ramulorum geminis collateralibus, supremo v. exteriori in nostro exemplari constanter abortiente. Cal. duplo brevior corollâ, firmior, nervosa, segmentis lanceolato-acuminatis corolla arcuè applicitis. Cor. subsesquiuncialis, ore brevi subbilabiato-patens, laciniis ligulatis convoluto-imbricatis, acumine obtusiusculo brevi. Anth. luteæ, lineares, versatiles. Germ. cylindræum, oblongum, viride, sulcato-striatum, triplo brevius corollâ. Stylus subexsertus, viridis stigmata saturatiùs viridia, dimidiato-lanceolata, linearia, in unum contorta, vel tandè soluta. Sertum squamosum ad basin interiorum floris omninò ut in BROMELIA nudicauli, cujus descriptio videnda in vol. 3. fol. 203.

As far as we have been enabled to ascertain, our plant is of an unpublished species. It differs widely from any we are acquainted with in the disposition of the inflorescence and colour of the corolla, the dulness of which forms a singular contrast with the brilliancy of the upper spathes of the stem. We have not learned its native country.

The drawing was taken at Mr. Malcolm's nursery at Kensington; where it was cultivated in the tan-pit of the hot-house, and flowered about the latter end of November. It had been obtained from a garden at Liverpool. We suspect it to be a South American plant.

Leaves multifariously ambient, from upright divergent, of a leathery firmness, lanceolately lorate shortly tapered at

the point, prickly ciliate, prickles very small, rather wide-set, longer ones 7 or 8 inches long or more. *Stem* upright, 9 or 10 inches high or more, round, simple, spathaceously sheathed: *sheaths* single, scattered, sphacelately membranous, involutely lanceolate, acuminate or long pointed, *lower ones* brownish, imbricately upright; *upper ones* the longest, divaricate, brightly crimsoned. *Branchlets* or *peduncles* slightly angular, wideset, scattered, thick, spreading, with the front edge slightly elongated into two shallow broad *bractes* scarcely observable but when carefully looked for, *lower ones* in the axils of the upper spathes, *upper ones* naked, all three times shorter than the flower or more. *Flowers* tubular, about two inches long, of the diameter nearly of a common pen, very pale pea-green, blueish at the tips, placed in pairs side by side at the ends of the branchlets, the uppermost or outer one in our sample always proving abortive, as shown in the present figure. *Calyx* twice shorter than the corolla, more substantial, nerved; *segments* lanceolately long-pointed sitting close about the corolla. *Corolla* nearly an inch and an half long, the orifice shortly and subbilabately spreading; segments ligulate, convolute, overlapping each other at the sides, shortly pointed. *Anthers* yellow, linear, vibrating. *Germen* cylindrical, oblong, green, furrowed, 3 times shorter than the corolla. *Style* slightly protruded, green: *stigmas* dark deep green, halved lanceolate, linear, twisted into one or else loose. The small scaly crown at the bottom of the interior of the flower resembles exactly that of *BROMELIA nudicaulis*, the description of which may be seen in vol. 3, fol. 203, of the present publication.



CĀCTUS* (Epiphýllum) Ackermānni.

Ackermann's Mexican Cactus.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ.

CACTUS.—*Suprà*, vol. 2. fol. 137.

Subgenus, EPIPHYLLUM Hermann.—*Corollæ* tubus longissimus, mediocris, v. brevissimus, sparsim et remotè squamulosus, inermis, 6 crenis ramulorum ortus, inter perpusillas et innocuas spinulas; limbus (corollæ fugacis) altè multifidus, vel quasi polypetaloides, rosaceus, aut subindè plus minus elegantissimè ringens.—Suffrutescentes Americæ calidioris ramosi, graciles, sed vix scandentes; in scopulos rupesve, vel super arborum truncos; ramulis alatim compressissimis, tenuibus sed carnosulis, lobato-crenatis, viridibus, lævibus, axi centrali gracili ligneo. Flores solitarii, sæpiùs magni speciosi, albi rosei coccineive, rariùs suaveolentes.—Haworth in Phil. Mag. Aug. 1829.

C. (Epiphyllum) Ackermanni; corollâ maximâ obsoletissimè ringente ante florescentiam assurgente, apice acuto; quàm tubus ferè quadruplò longiore. *Haworth l. c.*

Facies C. phyllanthoidis, at ramorum lobi pauciores, obtusiores, et ferè auriculiformes; et in corum axillis spinule ordinari fortè magis conspicuæ. Flores solitarii, sed numerosi, et affinium more directione ferè horizontali tubo cum germine plusquam unciali, sordidè viridi, et quasi quinquangulari è decursione squamularum paucarum seu remotarum et calycinarum. Petala imbricata, acuminata, nitentia, inferiora longè minora, canaliculatim carinata, apice recurvula; summa quasi biserialia, semi-expansa, lanceolata, coccinea; horum cælum versis oblonga et lanceolata, cetera terram spectantia oblonga et angustiora. Genitalia ut in affinibus, corollâ breviora, declinata, sedt apicem versùs curvatim ascendentia; stylo humiliora, stigmatibus circiter septem.—Haworth l. c.

* Theophrastus has a κάρτος, which is the modern Cynara Cardunculus, Cardoon or Chardon, the petioles of which are used as a delicate vegetable: it had no other resemblance to the modern Cactus than in being prickly. Epiphyllum, which signifies “upon a leaf,” is a name given long since, under the idea that the stems of these plants were leaves, and that consequently the flowers grew upon leaves.

This splendid plant is a native of Mexico, whence a part of a stem was brought by Mr. George Ackermann, in compliment to whom the species has been named by Mr. Haworth. The original stem was given to Mr. Tate, in whose Nursery it flowered in June of last year; and at that time our drawing was made. It subsequently produced fruit about the size of a pigeon's egg, of a dull purple colour, and with a smooth shining skin.

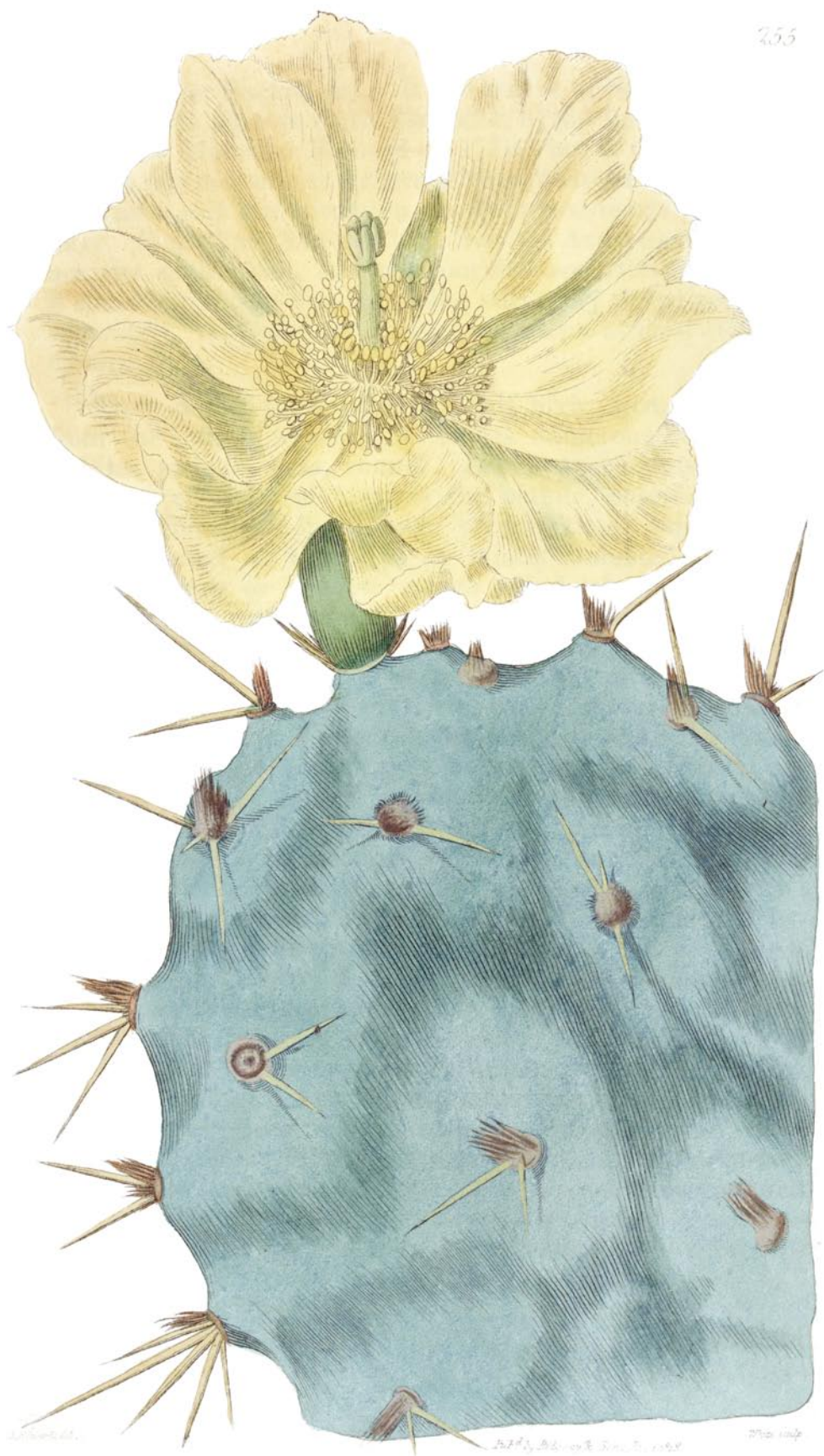
Some doubt having been entertained upon the accuracy of Mr. Tate's statement regarding the origin of this species, we think it right to say, that we have examined the plant which is said to have been imported from Mexico, and that we have no doubt whatever that it was really the produce of some foreign climate. We are also authorised to add, that Mr. Haworth, of whose description we have availed ourselves, and by whom the species was named, entirely participates in our opinion, and that he is now acquainted with Mexican individuals in two other collections.

It is, however, very remarkable, that about the same time that Mr. Tate's imported plant blossomed, our artist was summoned by Mr. Mackay to make a drawing of a seedling raised by Mr. Smith, Gardener to Lord Liverpool, at Combe Wood, which proved so similar to this as to give rise to the doubts above adverted to. We understand the flower of this seedling is rather larger, and its colour deeper red than that of the Mexican plant. It was first brought into bloom by John Brampton, Esq., of Stoke Newington, a gentleman who cultivates a small but very select collection of stove and greenhouse plants.

We learn from Mr. Tate, that the young shoots of his Mexican Cactus have a deep red margin, which is not the case with the mules above referred to.

This is a most desirable species, excelling in brilliancy of colouring even the well-known *C. speciosissimus*; its anthers and stigmata are said by Mr. Haworth to exhibit a beautiful, changeable, rosy, violet appearance. It requires exactly the same treatment as *C. phyllanthoides*, *truncatus*, and similar species.

J. L.



CACTUS Dillenii.
The Eltham Indian-Fig.

ICOSANDRIA MOONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310. *Div. II.* Petala et stamina indefinita.

CACTUS. *Suprà vol. 2. fol.* 137.

Div. Opuntiae, compressae articulis proliferis.

C. Dillenii, erectus; articulis frugiferis obovato-subrotundis, glaucis, spinarum validarum flavicantium fasciculis divaricatis et penicillo setoso-piloso baseos pluriès longioribus; germine penicillis nonnullis vagis in summitate, brevior corollâ: stigmate sexlobo.

Tuna major, spinis validis flavicantibus flore sulphureo. *Dillen. elth.* 398. *t.* 296. *fig.* 332.

Frutex pinguis, compressus, articulato-ramosus, 4-6-pedalis v. ultra, erectus, glaucus. Flores pauci in margine superiore articulorum terminalium, sulphurei, concolores, diametro subquadrunciali. Stylus albus.

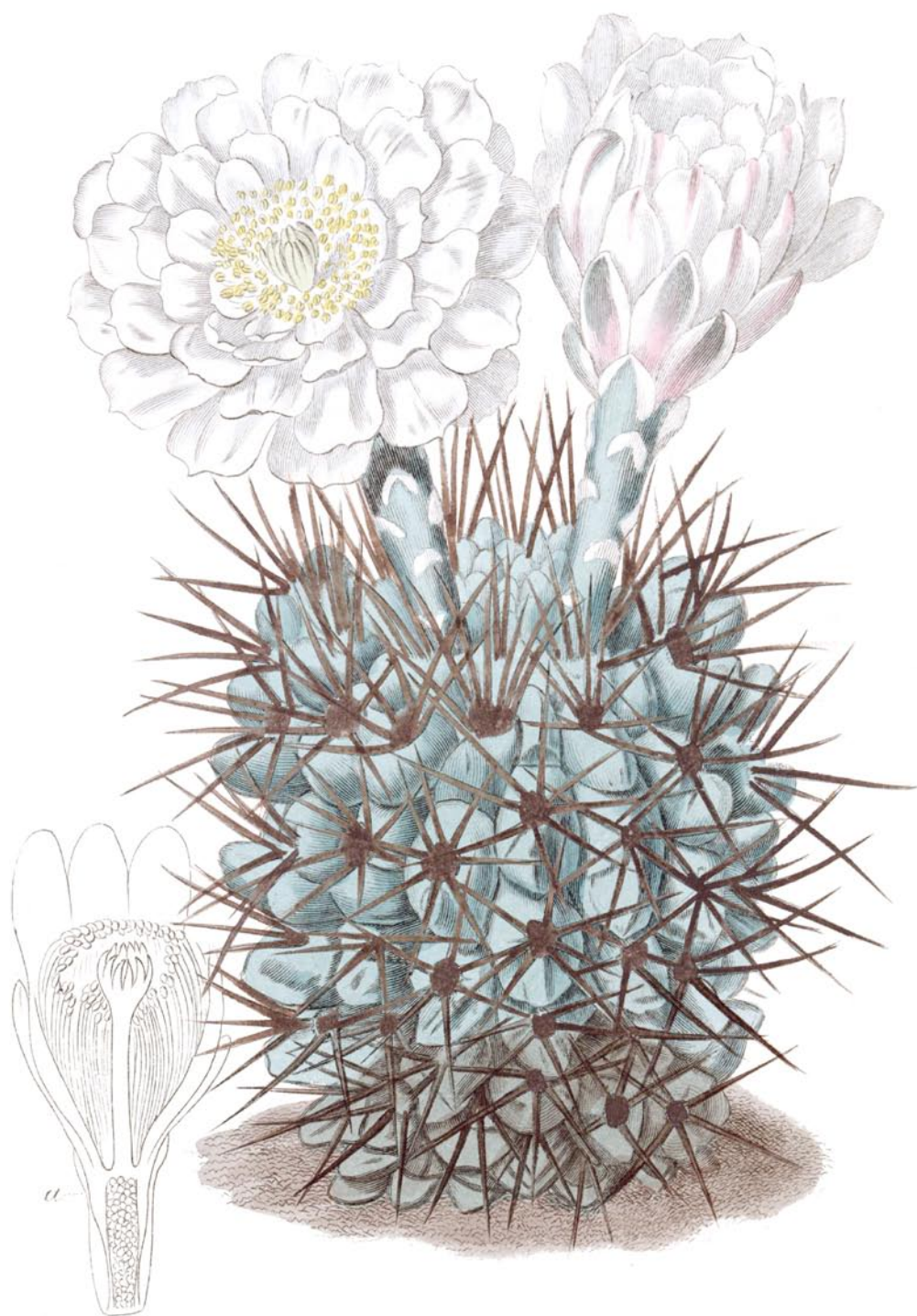
The upper articulations of the stem of this plant differ from those in *Tuna*, by being nearly as broad as long, and of an oblately cuneate or rather oblately obovate form; the flower is of one colour, not red on the outside, as there, and considerably larger; the germen has setaceous pencils or small tufts only at the upper part of the germen, and not scattered over the whole. It flowered in the celebrated garden at Eltham before 1732, and was represented by Dillenius, in his *Hortus Elthamensis*, but the figure has not been applied by Linnæus to any species. We see no reason for supposing it a variety of *Tuna*. Calling a plant a variety may serve to shuffle off the task of expressing near distinctions, but when said without the proof of experience or analogy, and in the face of difference, should have little weight. It is indeed a safe assertion, for he who makes it can never be shown to be in the wrong; a danger to which the opposite assertion may be subject to the end of time. But then a species that stands reputed as the variety of another, is a whole race falsified on the records of science; and, as varieties are ever less anxiously attended to than species, a race exposed to the chance of being entirely overlooked.

The drawing was made from a plant in the collection of Mr. Vere, at Kensington Gore. It was about four feet high, and had never been known to flower before. We believe it

to be one that has been very seldom seen in bloom in this country, if ever, since the time of Dillenius. It is not figured in Monsieur Decandolle's work on Succulent Plants. The flower was entirely decayed before we could find an opportunity of inspecting it for description.

The following version of the character of CACTUS *Opuntia* (in which *Tuna*, and many other apparently distinct species, have been included as varieties of each other) from Monsieur Decandolle's work may serve as an outline of the more general characteristics of the species of the division of the genus to which our plant belongs.

Stem flattened, jointed, joints sometimes ovate, sometimes oval, sometimes oblong, obtuse, *lower ones* ash-coloured, somewhat woody, nearly cylindrical, and scarcely separated at the junctures, *upper ones* herbaceous, fleshy, beset with tubercles disposed in a quincuncial order; from every tubercle are produced short pencils of thick hair or bristles, and fascicles of long thorns, which are either setaceous or subulate, white or yellow, hard, sharp-pointed, and prove abortive in various proportions. *Leaves* issuing out at the tubercles below the thorns, one to each tubercle, shaped like those of the Stone-crop, caducous, small, round, pointed, green or slightly purpled. *Flowers* from the upper edge of the terminal joints, solitary or many together, large, yellow, sessile. *Calyx* growing on the crown of the germen, divided into many *leaflets* at the top: leaflets flat, ovately round, resembling the outer petals and scarcely distinct from them. *Petals* of the *corolla* longer than the calycine leaflets, standing upon the calyx or the margin of the germen, for we may express it which way we will, in several ranks, cuneate, obtuse, sometimes emarginate, the middle nerve terminating in a short mucro or dagger-point. *Stamens* numerous, inserted at the same point as the petals, in several rows. *Filaments* filiform, upright, long: *anthers* inserted at the base, oval, yellow, bilocular: *pollen* yellow. *Germen* inferior or connate with the calyx, turbinate, green on the outside, beset with pencilled thorny tubercles like the stem. *Style* white, upright, thicker above the base, tapered at the top, generally hollow, cylindrical: *stigmas* 8-9- (in the present species 6-)rayed, thick, viscous, obtuse. *Berry* (something like a fig, whence the English name of "Indian-fig") fleshy, ovoid, large, purple, one-celled, with an ovate polyspermous loculament: *seeds* numerous, small, affixed round about to the wall of the loculament, brown, reniform or kidney-shaped.



CACTUS gibbosus.

Mr. Vere's Melon-Thistle.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310.

Div. II. Petala et stamina indefinita.

CACTUS. Cal. urceolatus aut longior tubulosus, squamis numerosis appendiciformibus sapè imbricatis tectus, suprâ germen deciduus. *Petala* numerosa multiplici serie, summo calyci inserta, basi sub-coalita, interiora majora. *Stam.* ibidbèm inserta paritèr infrâ coalita, antheris oblongis. *Stylus* longus; *stig.* multifidum. *Bacca* infera, umbilicata squamularum vestigiis exasperata, 1-loc., ad parietes seminifera; polysperma seminibus in pulpâ nidulantibus. *Arbores aut frutices, pingues, formâ varii sæpius aphylli et articulati, plerùmque obducti spinis fasciculatis et pilis in singulo fasciculo intermixtis.* *Opuntia stamina titillatione irritubilia.* *Jussieu gen.* 311.

Div. Echinomelocacti, subrotundi.

C. gibbosus, oblongiusculus, 16-angularis; spinarum fasciculis in unâ serie jugis costarum, alternantibus cum tuberculis totidem nudis elongato-mammosis et compressiusculis.

Cactus gibbosus. Haworth pl. succ. 173.

Turbinato-cylindricus, sordidè virens, parum excedens 3 uncias, diametro 2 cum dimidio, costato-angulatus; costæ longitudinales è tuberculis obesis depressis coronatis areolâ planâ fusco-tomentosâ spinis sub-7 validissimis acicularibus serie simplici fasciculato-divergentibus (junioribus albo et fusco variis) armatâ, et ex aliis alternis macrioribus compresso-mammillaribus glabris inermibus atque plurimùm prominentioribus; in summo vertice floriger, depressus, tuberculis armatis orbatus et mammillaribus diminutis tessellatus. Flores (hic 2) axillares in fasciculis spinarum costas terminantium, solitarii, fermè triunciales, inferiùs calycini virentes, superiùs petalini sordescentes et pallidescentes, intùs candicantes, inodori. *Cal.* cylindricus squamis obtusis appressis albidis dissitè sparsis consitus, ubi recondit germen parùm pennâ majore crassior uncialis persistens, ultrâ deciduus. *Petala* numerosa obcuneato-ligulata mucronato-obtusa, basi coalescentia, interiora longiora, vix latiora. *Spinæ* recentius enatæ profectò *Erinacei* similes; seniores deperdunt coloris variegationem.

A species not yet received into any general enumeration of vegetables, nor till now known to botanists by the in- florescence. It has been cultivated in the hothouse of Mr. Vere, at Kensington Gore, from before 1808, and flowered in June last, for the first time. This gentleman's gardener informs us, that it was raised from seed received from Jamaica by Messrs. Lee and Kennedy, of the Ham-

mersmith nursery. It belongs to the section of the Genus arranged under the appellation of "*Echinomelocacti*," or "Melon-Thistles," from the form and armature of the species of which it consists. Some of these strange-looking vegetables are said to exceed two yards in girth in their native places, and are composed of a succulent green flesh of one consistence throughout. In times of drought they are known to be sought for by the cattle, who after stripping off their spiny covering with their horns, devour them greedily. The entire genus, with the exception of *C. Opuntia*, common to both Europe and America, is spontaneous in the West Indian Islands, and the warmer parts of the american continent; where its numerous and multi-form species are said to grow from fissures in the sides of the steepest rocks. The fruit (or fig or pear, as it is sometimes called from its shape) is esculent in most of them.

The present specimen, the only one we have seen of the species, was not much more than three inches high, of an oblong cylindrical form, depressed at the summit, somewhat narrowed towards the base, and had 16 angles or ribs. Each rib or angle consists of a vertical rank of tubercles of two different forms, alternating one with the other, one sort having a depressed tomentose crown, armed with a divergent fascicle of about 7 or 8 horny acicular thorns, the other sort narrower, free from all pubescence and armature, and projecting much beyond the other. The *flowers* spring from the axils of the uppermost thorny fascicles, which terminate each rib at the outer edge of the depressed thornless tessellated area of the summit of the plant; these in this instance were two, nearly 3 inches in length, externally of a reddish or liver-coloured green, internally white, scentless. *Corolla* composed of numerous obcuneately ligulate petals, arranged in several imbricating ranks. *Germen* about an inch long enclosed within the green cylindrical outwardly loose-scaled persistent calyx.



a A flower dissected vertically, to show the stamens, style, stigmas, and the interior of the germen enclosed in the persistent tubular portion of the calyx.



CACTUS repandus.
Wavy-angled Torch-thistle.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310. *Div. II.* Petala et Stamina indefinita.

CACTUS. Suprà vol. 2. fol. 137.

Div. Cerei erecti, stantes per se.

C. repandus, erectus, longus, octangularis: angulis compressis undatis: spinis lanâ longioribus. *Lin. sp. pl. ed. 2. 1. 667.*

Cactus repandus. Willd. sp. pl. 2. 940. Hort. Kew. 2. 151. ed. 2. 3. 277.

Cactus erectus cylindricus sulcatus tenuior summitate attenuatus, aculeis confertis. Browne jam. 238.

Cereus gracilis. Mill. dict. 8. n. 8; (rectiùs quàm Cereus repandus ejusdem loci n. 5. in Hort. Kew. citatus).

Cereus altissimus gracilior, fructû extûs luteo, intûs niveo seminibus nigris pleno. Sloane jam. 2. 158. Trew ehret. t. 14.

Native of Jamaica and other parts of the West Indies, where it grows in the woods, to the height of fifteen or twenty feet. Sloane tells us that the fruit ripens in October, and is eaten. By some this is described as having the flavour of a strawberry. The dry stem of the plant is used by the natives for a torch to catch fish by, in the night-time. They hold it at the ends of their boats, lighted, and the fish leaping at it, they strike them with spears for the purpose.

The plant rarely blossoms in this country. The present drawing was taken from one that flowered and ripened its fruit, at the nursery of Messrs. Whitley, Brames, and Milne, Fulham.

Introduced by Mr. Philip Miller, in 1728. It is far from being so well known in our collections as the Great Night-flowering *Cereus* (*CACTUS grandiflorus*), nor indeed is it so deserving of the attention of the gardener, the flower being far less ornamental, and the fruit not worth being procured at the expense of a hothouse.



CACTUS speciosissimus.
Crimson-flowered Torch-thistle.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310. *Div. II.* Petala ct stamina indefinita.

NOPALÆ. *Jussieu ined. (fide Decand. thcor.* 246. *n.* 65.)

CACTUS. *Suprà vol.* 2. *fol.* 137.

Div. Cerei; erecti (stantes per se).

C. speciosissimus, caule erecto, 3-4-gono; angulis dentatis; flore campanulato-patente, genitalibus declinatis. *Desfontaines in mém. du mus. d'hist. nat.* 3. 190. *tab.* 9.

Cactus speciosissimus. Sweet hort. sub. lond. 109. *n.* 17.

Cactus speciosus. Willd. enum. suppl. 31; (non aliorum, qui *suprà vol.* 4. *fol.* 304. *videndus*).

Caules plures, recti, carnosì, verticales, trigoni tetragonique, simplices, parùmque divisi, bi-tripediales diametro uni-biunciali crassitudine nequaquam æquabili, faciebus lavibus canaliculato-concavis, angulis subsinuatis dentatis dente quoque aculeis fasciculatis divergentibus inæqualibus lutescentibus nuncve fusciscentibus tomento albo brevi denso cinctis armato. Flores inodori, horizontales v. subnutantes, ad angulos caulinos. Cal. monophyllus, multipartitus, segmentis ad oram membranosis, in disco virentibus, exterioribus ovalibus minoribus, interioribus lanceolatis concavis inæqualibus roseo-adumbratis. Cor. patens, campanulata, subsesuncialis diametro ferè pari: petala 20-25, punicea, summo calyci adnata, exteriora lanceolata acuta, interiora elongato-ovalia, latiora. Stamina numerosa: filamenta gracilia, teretia, alba, roseo-adumbrata, declinata, fasciculato-convergentia, uti petala summo calyci adnata, inferiora superioribus sensim longiora petalisque subæqualia: antheræ oblongæ, parvulæ, à basi afixæ, polline è spherulis albis granuloso. Stylus crassiusculus, roseus, declinatus, teres, staminibus inferioribus brevior; stigmata 10, alba, gracilia, paulò patentia, per paria approximata. Germen cylindricum, uni-biunciale, obiter sulcatum, ad angulos è squamulis obtusis singulis aculeolarum setacearum fasciculo armatis squarrosum. *Desfontaines loc. cit. (ex gallico versum).*

This splendid-flowered plant has been recently added to our collections by the Comtesse de Vandes, and blossomed for the first time in the hothouse of the well-ordered botanic establishment of that lady at Bayswater, where our drawing was made in July last. The flower is not only beautiful, but has the additional advantage of enduring several days in perfection. It is said to have been first procured at Paris from the national garden at Madrid by the Comte de Salm, and is supposed to have been originally derived from Mexico.

The order *Cacti*, of Jussieu, has been lately divided into *Nopaleæ* and *Grossulariæ*.

Stems several from one stock, straight, fleshy, upright, three and four cornered, simple, but little branched, 2-3 feet high, 1-2 inches in diameter, of unequal thickness, sides smooth channelled, angles shallowly sinuous, notched, furnished at the under edge of each notch with a pencil of unequal diverging tawny or brownish spines, set in a short dense cottony tuft. *Flowers* without scent, horizontal or slightly nodding, produced at the angles of the stems. *Calyx* of one piece, multipartite, segments membranous round the periphery, green at the disk, *outer* oval smaller, *inner* lanceolate, concave, of different sizes, shaded with rose-colour. *Corolla* spreading, campanulate, about six inches long and nearly of the same width: *petals* from twenty to twenty-five, crimson, attached to the neck of the calyx, *outer* lanceolate pointed, *inner* long-oval broader. *Stamens* very numerous: *filaments* slender, filiform, white shaded with rose-colour, declining, converging fasciclewise, as well as the petals attached to the neck of the calyx, under ones gradually longer than the upper and about the length of the petals: *anthers* small, oblong, fixed at the base to the point of the filament: *pollen* white, granular, grains globular. *Style* thickish, rose-coloured, declining, cylindrical, shorter than the undermost stamens: *stigmas* ten, white, slender, slightly spreading, disposed in contiguous pairs. *Germen* cylindrical, from one to two inches long, slightly furrowed, beset at the angles with small obtuse slightly raised scales, each of which is furnished with a small pencil of bristlelike spines.

The above description is a version from the excellent one in french by Professor Desfontaines.



J. Edwards del.

Pub. by J. Ridgway & Son, Eng. 1848. 170 Piccadilly

J. Smith sc.

CACTUS speciosus

Rose-flowered Indian-Fig.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310. *Div. II.*

CACTUS. Suprà vol. 2. fol. 137.

Div. Phyllanthi.

C. speciosus, caulibus articulatis, compressis, foliaceis, serrato-repandis; floribus magnis tubo inermi, squamuloso. *Bonpland nav. et malmais.* 8. *t.* 3; (non verò *Willdenovii* in *suppl. enum. hort. berol.*, *cujus planta est* CACTUS speciosissimus. *Mém. du museum.* 3. 190. *t.* 9.)

Cactus speciosus. Desfont. tabl. 191.

Frutescens. Caulis articulatus, ramosus, latè virescens, subnudus, carnosus, marginibus crenato-excisis, ex cylindraco sæpèque subangulati cum crassitudine pennæ scriptoriæ in laminam foliaceam oblongam latitudine sesquibunciali longitudine plus minùs sesunciali extenuatus, nervo medio alios parallelos utrinque emittente percursus, imò crenarum sinû armatus fasciculis spinularum minutarum lanugine albicante cinctus vix oculis nudis manifestis. Flores in crenis caulinis solitarii, quadriunciales, infundibulformes, curvuli, extus squarroso-recurvi, intus tubuloso-convergentes. Germ. oblongum, pluries brevius tubo calycis. Cal. oblongus, cylindricus, tubo pallide virente, squamis atropurpureis reflexis munito, brevior segmentis limbi. Cor. latè rosea, sublongior calyce; pet. elongato-oblonga, apice mucronata, intima in campanam tubuloso-oblongam conniventia. Stam. numerosa æquantia corollam: fil. subcapillaria, tenera, alba. Stylus æqualis staminibus, filiformis. Stig. 5 v. 7.

This beautifully blossomed and curious plant was first observed by Messrs. Humboldt and Bonpland during their memorable travels in South America. They met with it, in 1801, growing wild near the village of Turbaco, situated a few leagues to the south of Carthagenæ, at the elevation of 126 fathoms. The species belongs to a section distinguished in the genus by a thinner flesh, less substantial yet succulent stems, the articulations of which are extended into the form of flat elongated leaves, are nearly free from the thorny pencils that beset the surface of the rest and largely indented at the margin. It differs in its own section of the genus, from *alatus* in not having a small greenish white flower, and from *Phyllanthus* in not having a long slender white one.

The drawing was taken last June, in the conservatory of Mrs. Gilbert, at Earl's Court, where the plant had been received from France the year before. The first time it bloomed

in Europe was in 1811, near Paris, in the garden of La Malmaison, then belonging to the Empress Josephine. It was supposed to have been raised from seed brought home by the celebrated travellers, by whom we have already said the species was first observed.

Stem shrubby, jointed, branching, of a clear soft green colour, nearly smooth, fleshy, largely and crenately indented at the edge, from cylindrical and often sub- angular with the thickness of a common pen, dilated into an oblong foliaceous lamina, from an inch and a half to two inches in breadth and about six in length, traversed longitudinally by a midrib branching into parallel side- nerves, armed at the angles of the indentations with pencils of minute prickles scarcely visible to the naked eye and imbedded in short white wool. *Flowers* in the indentations of the branches, solitary, 4 inches long, funnelform, slightly curved, squarrosely patent without, within converging cylindrically. *Germen* oblong, several times shorter than the tube of the calyx. *Calyx* oblong, cylindrical, with a pale green tube beset with blackish purple reflected scales and shorter than the segments of the limb. *Corolla* of a fine rose-colour, a little longer than the calyx; *petals* elongatedly oblong, with a small point at the end, inner ones tubularly campanulate. *Stamens* numerous, equal to the corolla: *filaments* of an almost capillary fineness, tender, white. *Style* equal to the stamens, filiform. *Stigmas* 5 or 7.



Wm. Drake del.

Pub. by J. Ridgway 169 Piccadilly Feb. 1st 1845.

J. Barclay sc.

CĒRĒŬS leucānthŭs.

White Torch-thistle.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTACEÆ.*CEREUS. Botanical Register, vol. 4. fol. 304.*

C. leucanthus; caule conico multangulari, costis obtusis, spinia 9-13 validis subulatis patentibus fusco-griseis unico centrali subæqualibus: lanâ brevissima, squamis tubum floris vestientibus minimis basi radiatim pilosis, sepalis petalisque acutissimis staminibus multò longioribus.

C. leucanthus. Pfeiffer Cact. p. 74.

Echinocactus leucanthus. Gillies.

This fine plant was originally received by the Horticultural Society from the late Dr. Gillies, who found it in Chili; it flowered in the Society's garden for the first time in 1831, when its blossoms had not gained their full size, and again in August 1836, at which time they had acquired the beautiful form and colour now represented.

The specimen in question is now between nine and ten inches high, seven inches in diameter at the base, whence it tapers away till its diameter is not more than three or four inches. It has seventeen ribs at the base, and twenty-two at the top, which are obtuse, and a little wavy, but gradually disappear altogether near the ground, where the stem becomes round. The spines are brownish when young, and spring from the midst of a quantity of brown wool, which becomes grey with age, and at last disappears; when full with from 9 to 13 in an outer row, and one in the centre, grown they are rather more than an inch long, dull grey, stiff, terete, a little curved right and left from the centre, S which is straighter, but scarcely longer than the others. The flowers are six inches long, pure white inside, but dull olive green on the outside and on the top, with a tinge of pink at the points of the sepals and outer petals. The apex of the plant is so closely covered with wool as to look not a little like a *Melocactus*.

March, 1840.

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The most healthy plants of this species are those which are either raised from seed in this country, or imported when small and in a growing state. Whenever the seed is ripe it should be sown in sand and placed on a warm dry shelf; it will vegetate freely, and the seedlings should have very little water. They will root well in the sand, and need not be potted until they are pretty strong plants. The best soil for potting is loam, peat, and brick rubbish, but it should never be very rich, and the pots must be well drained.

The practice of growing plants of this kind in dung or tan frames has been very much eulogised, and some specimens which have been sent from the continent to this country, reared in this manner, were certainly healthy and beautiful. Those who adopt this system in summer, must however take care to remove their plants into a dry atmosphere before the approach of winter, or they will be very apt to lose some of their finest specimens.

The present species will live in any cool dry atmosphere a few degrees above the freezing point in winter, but will not grow or flower under a temperature of 55° or 60°.



CÁCTUS* speciosissimus; var. lateritius.

Brick-red hybrid Cactus.



ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ Juss. (Introduction to the natural system of Botany, p. 54.)

CACTUS.—Suprà, vol. 2. fol. 137.

GARDEN VARIETY.

The race of Cacti, approaching *Cactus speciosissimus* in habit and in the general appearance of their flowers, is now become one of the most striking objects of modern Horticulture. Derived from parents unrivalled in the vegetable world for vigour of constitution, brilliancy of colour, and boundless fecundity, they are now to be met with in every greenhouse and drawing-room, throughout the entire year. At a late meeting of the Horticultural Society, Mr. Snow, the Gardener of Sir Edmund Antrobus, exhibited individuals, each of which was literally covered with blossoms; as many as between two and three hundred being found upon a single plant. This same cultivator has stated, that, by judicious management, a succession of such specimens may with ease be procured during every month in the year.

The variety now represented was raised by Mr. Pressley, Gardener to Walter Boyd, Esq. of Plaistow, in Essex. It approaches *C. Jenkinsoni* in many respects, but has paler and more brick-red petals. It was exhibited at a meeting of the Horticultural Society on the first day of May, 1832, and was much admired.

* See fol. 1331.

No one seems to have any difficulty in cultivating plants of this description; nevertheless, it may be well to know that they succeed much better in soil composed of a large proportion of leaf-mould mixed with sand and loam, than in any other compost.

J. L.



CACTUS truncatus.
Ringent-flowered Cactus.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTI. *Jussieu gen.* 310. *Div. II.* Petala et stamina indefinita.

NOPALÆ. *Jussieu MSS.*; (*fide Decand. théor. bot.* 246. n. 65).

CACTUS. *Suprà vol. 2. fol.* 137.

Div. Phyllanthi.

C. truncatus, ramis recurvo-divaricatis, foliaceo-compressis, articulis apice lunato-truncatis; floribus terminalibus solitariis nutantibus, obliquo-ringentibus, staminibus adscendentibus, stigmatibus compacte conniventibus.

Cactus truncatus. *Link enum. hort. berol. alt.* 2. 24.

Epiphyllum truncatum. *Haworth suppl.* 85.

Planta perennis, dichotoma, glauciuscula, humilis, caule brevi, ramis articulatis, recurvo-divaricatis, subfoliaceo-compressis, articulis cuneato-oblongis, subuncialibus, dentibus paucis vagis axillari-penicillatis utrinque serratis, apice lunulato-præcisis. Flores subtriunciales super fundum candidum roseo-rubentes, terminales, sessiles, solitarii, nutantes: petala imbricata turbinato-conniventia, rictu reflexo deorsum obliquo supernè patentia. Stamina numerosa, fasciculata, subadscendentia, petalis æqualia. Stigmata plura (5-7?) atrosanguinea in conum compacta. Germ. viride, turbinato-oblongum, flore pluriès brevius.

The fine blossom of this newly imported species made its first appearance, we believe, last summer in several of our gardens together.

The drawing was taken from Mr. Hood's collection, Vauxhall Road; where it is cultivated in the hothouse.

We were favoured with an excellent representation of the entire plant, by Mrs. Harrison, from a sample raised from Brazil seed, at Aigburgh, near Liverpool, in 1821. We regret, notwithstanding the size was too large for our work, we had not inserted a diminished outline of that drawing; the divaricated flexure of the branches, evidently a specific habit, being skilfully characterized in it. In our plate there is room only for the termination of the branches with their flowers of the natural size, and these are shown upright; but in their place on the plant they terminate the

recurvedly divaricated branch, and incline downwards as well as the flower.

The species is of the same division as *CACTUS speciosus* already figured in this work (v. 4. fol. 304). It has however several peculiar features, of which a ringently slanted reflexed expansion of the flower, ascending stamens, and crescentwise foreshortened joints of the branches seem the most prominent.

Stem very short, soon and repeatedly divided; branches widely and divaricately extended, horizontally recurved, foliaceously compressed, the edges perpendicular, glaucous, jointed, the joints cuneately oblong, lunately truncate at the upper end, about an inch long, with a few irregular axillary pencilled notches at the edges.



CERĖUS crenātus.

Crenated Torch Thistle.

ICOSANDRIA POLYGYNIA.

Nat. ord. CACTACEÆ.

CEREUS. *Botanical Register*, vol. 4. fol. 304.

§ 7. Alati, Pfeiffer.

C. *crenatus*; ramis strictis compressis biconvexis margine exactè crenatis omnino viridibus, floribus maximis candidis, stigmatè 9-radiato.

A most remarkable plant, belonging to the winged section of Torch thistles, according to Pfeiffer, which Link regards as a peculiar genus and calls *Phyllocactus*. It is the finest thing yet known of its class with white flowers, and will doubtless prove invaluable as a breeder; for its habit is beautiful, to say nothing of its magnificent flowers, which rival the night-flowering Cactus, but open in the day time. When produced last month at the exhibition in the Horticultural Society's Garden, it received the highest medal offered for new plants. Let us only imagine a cross between it and *C. speciosissimus* or *Ackermanni*!

For the following information concerning it we are indebted to Mr. Booth.

This fine species, with several others, was forwarded from Honduras in 1839 by George Ure Skinner, Esq. and presented to Sir Charles Lemon, Bart. M, P. with whom it flowered at Carclew in May 1843. Although similar in some respects to *Ep. latifrons* of *Botanical Magazine*, fol. 2692, it proves to be perfectly distinct and far more desirable, on account of its flowers opening in the day time and continuing expanded for nearly a week, whilst those of the one to open in the evening, are in perfection at midnight, and finally close a little before sunrise. It is also proper to state that in addition to their other recommendations the lowers of this species are deliciously fragrant, which will no doubt render it a most valuable acquisition to the admirers of this singular tribe of succulents.

The plant grows about two feet high with large spreading branches, some of which in their young state are round and angular, with bristly hairs at the joints, resembling the young shoots of *Cereus speciosissimus*. Their most usual form, how-

ever, is flat and broad, tapering a little at the base, where they are round, hard, and woody. The flat part is remarkably thick and leathery, from one to two feet long, and about two and a half or three inches wide, of a rich deep green, with large crenatures along the margin, from which it gradually thickens towards the midrib which is prominent from the base to the point. The *flowers* are produced at the first or second sinus from the apex of the leaf, or shoot, on which several buds make their appearance, but only one of them comes to maturity. The *tube* is round, and about four inches long, slightly curved and angular, with three or four series of elevated, ovate-acuminate, brownish green scales on the outside, each of which are similar in form and colour but vary in size, the inner ones being small, and the outer ones so large as to resemble the sepals from which they are scarcely to be distinguished. The *buds* are long and much pointed, of a brownish pink colour. The *flowers* are large and extremely handsome, being about five inches in diameter, and of a pale cream colour. The *sepals* are linear lanceolate acute, about four inches long and three-fourths of an inch wide, ranged in two rows of six, the one alternating with the other, and the inner being somewhat paler than the outer, which is a deep brown. The *petals* are eighteen in number, arranged in three rows, similar to the sepals. They are ovate oblong, somewhat pointed and taper towards the base, which is thick and fleshy, but otherwise they are of a thin delicate texture, about three and a half inches long and upwards of an inch broad. The inner row is rather shorter than the rest but similar in every other respect. The *filaments* are very numerous and about two-thirds the length of the petals, to which many of them are attached round the mouth of the tube. The greater number of them, however, are placed along the throat of the tube, which causes them to be of unequal lengths. All are of the same pale cream colour as the petals, with a slight greenish tinge internally. The *anthers* are ovate, obtuse, deep yellow. The *style* is very conspicuous, being about the thickness of a straw and as long as the petals, with eight recurved feathery looking stigmas half an inch long. The *ovarium* is at the bottom of the tube and is comparatively small, yellowish green, apparently five-angled.

The plant is easily cultivated in rich loamy soil mixed with small bits of charcoal instead of sand, and increases freely by cuttings of the leaves or shoots, which not unfrequently emit roots at their extremity. It requires to be grown in a warm greenhouse, and to be placed in a situation where it may have plenty of light.



The Crimson Creeping CEREUS.

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ICOSANDRIA MONANDRIA.

Nat. ord. CACTEÆ Vent. (Introduction to the natural system of Botany, p. 54.)

CACTUS.—Suprà, vol. 16. fol. 1331.

GARDEN VARIETY.

Although the object of the Botanical Register is by no means to give a place to transient Horticultural varieties, yet we have occasionally deviated so far from our original plan as to introduce very remarkable races when there has been any thing either in their history, or their general appearance which seemed to justify such a proceeding.

In the present instance we have a combination of much that is curious in history and beautiful in structure. The subject of the present notice was raised a few years ago by Mr. Mallison, Gardener to Sir Samuel Scott, from seed of *Cactus speciosissimus* fertilised by *Cactus flagelliformis*; the former the well-known erect species with brilliant scarlet blossoms, the latter the equally common trailing kind with pale rosy flowers. The result has been, as perhaps might have been expected, a hybrid, as nearly as possible intermediate between the two parents, having all the brilliancy of colour of the female line combined with the prolific constitution and trailing habit of the male. It was exhibited for the first time at a meeting of the Horticultural Society in 1832; the specimen was about 2 feet long, and excited much admiration. It was loaded with flowers, of the most healthy appearance; and what was especially remarkable, the colour of its stem was not the dull green of *Cereus flabelliformis*, but the rich bright hue of *Cactus speciosissimus*. The only plant we are acquainted with is in the possession of Sir Samuel Scott: it must be classed among the very best hybrids which Horticulturists have succeeded in obtaining.

It appears to be a hardy greenhouse plant, and will doubtless increase freely by cuttings. J. L.



Miss Drake. del.

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J. Wallis. sc.

* CÉREUS triangúlaris.

Triangular Torch-thistle.

 ICOSANDRIA MONOGYNIA.

Nat. ord. CACTACEÆ. (Introduction to the Natural System of Botany, p. 54.)

CEREUS, D. C. *Sepala* numerosissima, imbricata, basi ovario adnata, in tubum elongatum concreta, exteriora breviora calycinalia, media longiora colorata, intima petaliformia. *Stamina* numerosissima cum tubo concreta. *Stylus* filiformis apice multifidus. *Bacca* sepalorum reliquiis areolata, tubereulata aut squamata. *Cotyledones* nullæ? (depauperatæ).—Frutices *carnosi, elongati, axi ligneo interne medullifero donati, angulis verticalibus spinarum fasciculos gerentibus regulariter sulcati*. Anguli seu alæ nunc plurimæ, nunc paucissimæ, rariùs duæ tantum et tunc rami compresso-alati. Flores ampli è spinarum fasciculis aut crenis angulorum orti. De Cand. Prodr. 3. 463.

§. 2. *Serpentini*. Caulis articulatus prostratus radicans vel volubilis. D. C.

*** 3—4—*angulares*.

C. triangularis; repens trigonus, aculeis brevibus quaternis decussatis, sepalis exterioribus spatulatis apice foliaceis, petalis lanceolatis cuspidatis.

Cactus triangularis. *Linn. sp. pl.* 666. *Jacq. amer.* 152.

Cereus triangularis. *Haworth. syn.* 180. *De Cand. prodr.* 1. c.

A native of Mexico and the West India Islands, whence it was introduced long since, but it flowers so rarely that it has never yet been represented from an European specimen. Bradley, who has given it in his work on succulent plants, has only figured its stem.

For the specimen from which our drawing was made we are indebted to Sir George Staunton, Bart., in whose garden at Leigh Park, near Havant, it flowered in Septem-

* Literally, a torch or taper; a name translated by the English Torch-thistle; and given to these plants in consequence of the upright kinds having something the appearance of the tapers used in the ceremonies of the Roman Catholic religion.

ber 1834, under the good management of Mr. Robert S. Wilson the gardener. The plant had been in the collection at Leigh Park upwards of fifteen years without blossoming ; between March and September it produced shoots upwards of seven feet long.

Two flowers were perfected, of which one opened about six o'clock in the afternoon of the 22nd of September, and faded about eleven A. M. on the following day; the other was despatched to London by coach on the 24th of the same month, and reached London in perfect condition.

It was indeed a beautiful object, its petals were of the most dazzling whiteness, the effect of which was greatly heightened by the dense mass of yellow stamens occupying the centre, and by the border of olive green sepals, on which the petals reposed. This is said to have the largest flowers of all the species, not even excepting the common night-blowing *Cereus*; its fruit is described as being quite smooth, of a rich scarlet, and with the size and form of a goose's egg.



SMALL-FLOWERED SHEW-CEREUS.

Garden Variety.

May we be permitted, in the first place, to propose for the long Latin words *Cereus speciosissimus* the more English, though not quite English, term of Shew-Cereus; a name, in the first place, nearly a translation of the Latin, and secondly characteristic of the purposes to which this beautiful species is so generally applied.

As for the plant now figured, it was sent up from Bury Hill, by Mr. Scott, gardener to Charles Barclay, Esq., as the species called *Cereus coccineus*. Now there are two plants so called by Botanists: one a variety of *Cereus setaceus*, with *white* flowers, and the other a plant with from four to eight long bristles in each of its tufts of spines, and scarlet flowers six inches in diameter, with a little stain of blue on the *edges* (not middle) of the petals.

It is evident then that this is neither of the plants intended under the name of *C. coccineus*. It is, in fact, some garden variety of the Shew-Cereus, with smaller flowers than usual. It is a distinct and pretty variety worth cultivation.

It is a greenhouse plant requiring the same treatment as the Shew-Cereus itself. Formerly such plants were grown in the poorest soil, such as old lime and brick rubbish, but it is now well known that they do far better in a much richer compost. Equal parts of rich loam, sandy peat, and dung, well mixed together, seem to suit them admirably. The principal point to be attended to in their management is, to supply them freely with water when growing in the summer, and then to place them out in a warm part of the garden in the autumn, fully exposed to the sun. They should be taken into the greenhouse before the weather gets too wet and cold, and kept rather dry during the winter. The present species strikes readily from cuttings treated in the usual way.



CEROPEGIA africana.

Cape Ceropegia.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. Brown in Wern. trans. edinb. 1. 12. Id. prod. 1. 458; et suprâ vol. 2. fol. 111. Div. I. ASCLEPIADEÆ VERÆ. Massæ pollinis 10, læves, per paria (diversis antheris pertinentia), affixæ stigmatis corpusculis, sulco longitudinali bipartilibus. Filamenta connata, extûs sæpiùs appendiculata.

CEROPEGIA. Asclepiadea. Cor. tubulosa, basi ventricosa, limbi laciniis ligularibus conniventibus: æstivatione valvata. Columna fructificationis inclusa. Corona staminea 10-fida: laciniæ 5 antheris distinctis opposite longiores cum 5 reliquis (indivisis bifidisve) alternantes. Massæ pollinis erectæ. Herbæ glabræ sæpiùs volubiles, radice tuberosâ. Umbellæ interpetiolares, nunc pauciforæ. Brown MSS.

C. africana, pedunculis 2-3-floris, foliis ovato-lanceolatis carnosis, limbo corollæ barbato, coronæ laciniis longioribus aversis falcato-recurvis; brevioribus indivisis. Brown MSS.

Radix: tuber pro ratione herbæ 3-6-uncialis magnum. Caulis simplex, sæpiùs volubilis. Folia acuta, planiuscula, avenia, brevè petiolata, divaricata apicibus subrecurvis, semuncialia. Spica rara è pedunculis alternis brevibus 2-3-floris, pedicellis brevibus minuti bracteolatis. Flores erecti, inferiore præcociore. Cal. 5-partitus, laciniis lineari-subulatis modicè patentibus basi ventricosâ tubi corolla ferè ter brevioribus. Corolla: tubus a basi obovato-globosâ obsolete pentagonâ viridi cylindræus, fance infundibuliformi striata; limbi laciniæ lineares intûs marginibusque pilis coloratis patulis acutis barbatae, erectæ apicibus conniventibus levitèrque coherentibus: limbus inexpansus prismatico-pentagonus fauce pentagonâ angulis extantibus cum laciniis limbi alternantibus. Columna fructificationis basi ventricosâ tubi inclusa. Corona apici tubi staminei brevis inserta monophylla decemloba: Lobi quinque cum staminibus alternantes abbreviati indivisi obtusi basi saccati: quinque reliqui quasi interiores antheris oppositi aliquotiès longiores margine interiori truncato-canaliculato exteriori in aciem attenuato. Antheræ distinctæ ovatae loculis lateralibus longitudinalitèr dehiscentibus appendice apicis camoso brevi acuto stigmate incumbente. Massæ pollinis minutæ supra basin affixæ subglobosæ. Stigma muticum. Brown MSS.

A very curious unrecorded species, now first introduced from the Cape of Good Hope. The masterly description is by Mr. Brown, who has so far modified the character of the genus with respect to that defined by himself in his illustration of the natural order, in the Memoirs of the Wernerian Natural History Society, as to fit it for the re-

ception of the species before us; which he considers too naturally allied to the East Indian group he had originally allotted to *CEROPEGIA* to be separated.

The drawing was taken in March last at the Nursery of Messrs. Colvill, in the King's Road, Chelsea; where the plant flowered in the hothouse. No species of the genus has been before noticed in any of the catalogues of our gardens.

Herbaceous. *Root* tuberous, large in proportion to the rest of the plant, which is scarcely more than from three to six inches high. *Stem* simple, generally twining. *Leaves* ovately lanceolate, fleshy, pointed, flattish, veinless, shortly stalked, outspread and slightly recurved at the ends, about half an inch long. *Spike* thinly set, composed of short alternate 2-3-flowered peduncles, divided into short pedicles with diminutive bractes. *Flowers* upright, the lowermost opening first. *Calyx* 5-parted; segments linearly subulate, moderately spreading, almost three times shorter than the urceolate part of the tube of the corolla. *Corolla*: tube cylindrical, springing from a green obovately globular faintly five-cornered base; faux funnelform, scored; segments of the limb linear, bearded on the inside and at the edges by coloured pointed hairs, upright, converging at the tips where they are slightly attached to each other: unexpanded limb a pentagonal prism; faux pentagonal with salient angles that are alternate with the segments of the limb. *Column* contained within the ventricose base of the tube. *Crown* of one piece, 10-lobed, inserted at the top of the short stamaneous tube: the five lobes that alternate with the stamens are short, entire, obtuse, and pouched at the base; the other five opposite to the anthers, and in some sort inner ones, are several times longer, placed edgewise from centre to circumference, bend outwards, are falcately recurved, with the inner margin truncate-ly channelled, and the outer sharpened to an edge. *Anthers* apart, ovate with lateral cells which open longitudinally, tipped by a short pointed fleshy appendage that lies upon the stigma. *Pollen-masses* minute, subglobular, attached above their base. *Stigma* pointless.

From the Latin of Mr. Brown.



* CEROPÉGIA élegans.

Elegant Ceropegia.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. R. Br. (Introduction to the Natural System of Botany, p. 210.)

CEROPEGIA. Supra, vol. 8, fol. 6~6.

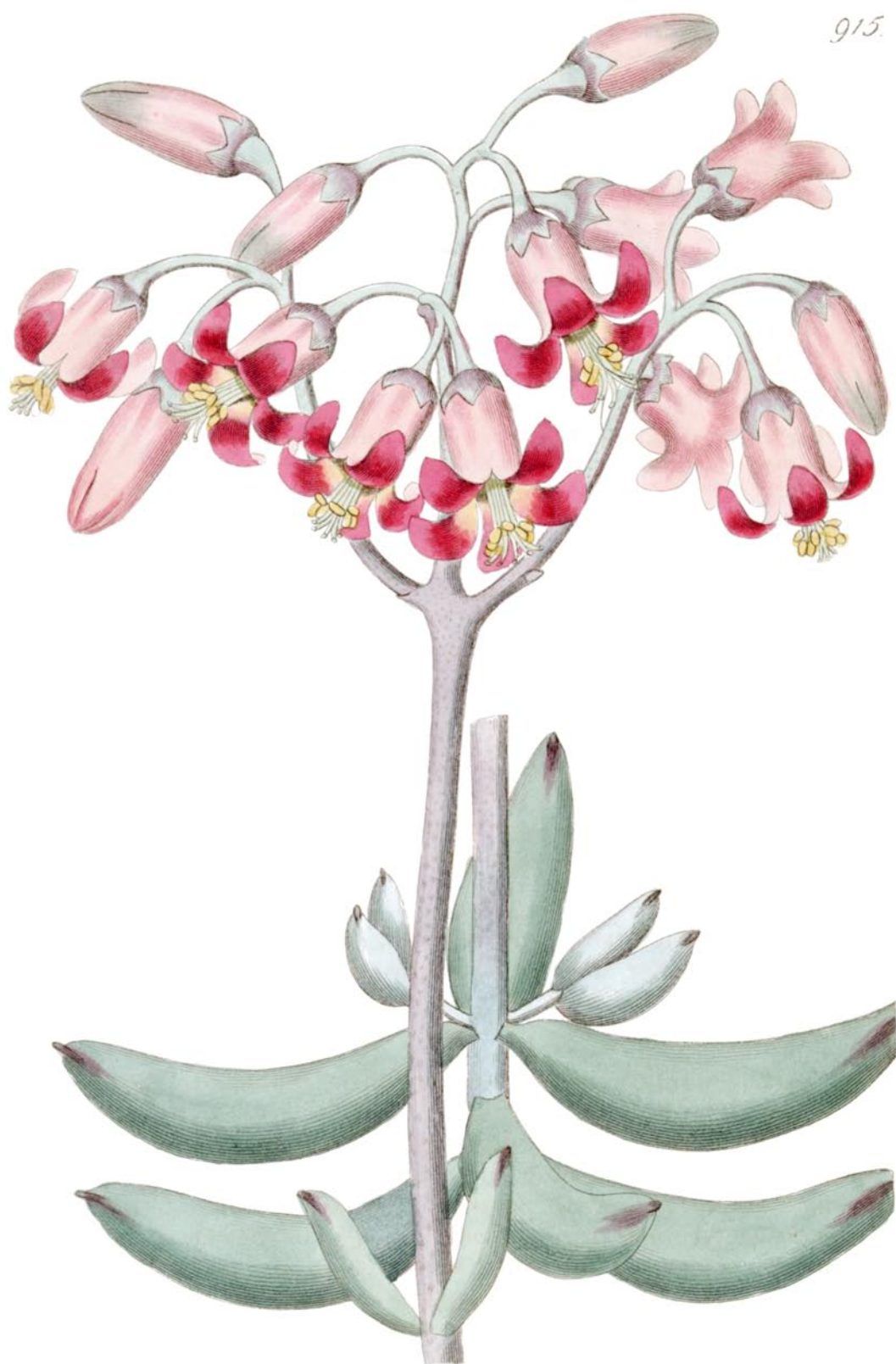
C. elegans; volubilis, lævis, radice fibrosa, folis oblongis acutis, pedunculis axillaribus 1-2-floris, corollæ tubo clavato incurvo basi inflato-ventricosus, limbo hemisphærico, laciniis ligulatis longe ciliatis, lobis coronæ stamineæ exterioribus profunde bipartitis. *Wallich. in Bot. mag. t. 3015.*

A native of the mountains of India called the Nilgherry, and introduced to this country in 1826 by Dr. Wallich.

It is a small twining plant, with dingy purplish brown stems and leaves, and livid flowers blotched with purple. They have little beauty, except when they are open; at that time their orifice is closed by a number of long purple bristles, which converge over the centre, and form a sort of natural *chevaux-de-frise*, which will prevent both the ingress and egress of insects.

Being an East Indian plant, it is usually kept in the stove, where it flowers enough from May to October, and is easily multiplied by cuttings. It is however, nearly hardy; it thrives better in the open boarder trained to a stick in a sheltered place, and in the winter requires no better protection than a common green-house.

* From κηροπήγιον candlestick, in allusion to the resemblance borne by the corollas of some species to the branch of an antique candelabra.



COTYLEDON decussata.

Cross-leaved Cotyledon.

DECANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ.

COTYLEDON L.—*Calyx* 5-partitus. *Corolla* monopetala, tubulosa, 5-fida. *Stamina* 10, rarius 5, corollæ inserta. *Germina* 5. *Capsulæ* 5.—*Herbæ aut Suffrutices*. *Folia opposita aut alterna, interdum pinnata*. *Flores terminales, corymbosi, aut spicati*. Juss. gen. 207.

C. decussata; fruticosa, foliis concinnè decussatis subteretibus mucronatis glaucis, floribus paniculatis pendulis. *Bot. Mag.* 2518.

Cotyledon foliis angustis oppositis, cum limbo purpureo, floribus pendulis.

Burm. afr. t. 22. *f.* 1.

C. papillaris. *Haw. Suppl. succ. p.* 21. *revis. succ.* 20 *non Thunbergii*.

Our drawing of this species of *Cotyledon* was made from the collection of Mr. Hood, of South Lambeth, in May 1824, a figure having been at the same time furnished for the Botanical Magazine, a circumstance of which we were not at the time aware.

Not having seen either plant or specimen, we are unable to offer any original description of the species. In the work to which we have already alluded it is thus described.

Stem shrubby, erect, but very little branched. *Leaves* opposite crosswise, sessile, fleshy, nearly cylindrical, somewhat flattened on the upper side, glaucous, or even hoary, narrowed at both ends, varying somewhat in shape, and terminated with a dark purple mucro. *Common peduncle* terminal, erect, smooth, half a foot long, purple, nearly naked, or furnished with a pair of smaller leaves only, terminated by a panicle of many pendulous red flowers. *Calyx* 5-toothed, four times shorter than the tube of the corolla.

Corolla large, shewy, red; tube cylindrical, nearly an inch long; *limb* half the length, divided into 5 laciniaë, rolled back. *Stamens* 10, exserted: *filaments* pass through a hairy ring, near the bottom of the tube; *anthers*, before the flower opens, upright, with four grooves. *Styles* 5, rather longer than stamens: stigmas lobular, villous. *Nectaries* 5 concave scales, one at the base of each germen.

There can be no doubt, after an inspection of the Flora Capensis of Thunberg, that his *Cotyledon papillaris* is a species altogether distinct from this.

J. L.



CRÁSSULA* turríta.

Turretted Crassula.

PENTANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ.

CRASSULA Linn.—*Calyx* 5-partitus corollâ multò brevior, sepalisplan-
iusculis. *Petala* 5, stellatim patentia, libera. *Stamina* 5, filamentis subulatis.
Squamæ 5, ovatæ, breves. *Carpella* 5, polysperma.—Frutices aut herbæ,
sæpissimè *Capenses*. Folia *opposita*, *integerrima* aut *suberenata*. Flores
albi, aut *rariùs rosei*.—Dec. prodr. 3. 383.

§ 8. Turgoseæ; *herbaceæ subnudæ*, *foliis plerisque radicalibus*, *in-*
florescentiâ spicato-thyrsoideâ, *floribus nempè verticillato-subsessilibus*.
Species omnes verosimiliter biennes. Dec. l. c.

C. *turríta*; *foliis radicalibus oppositis connatis quadrifariâ imbricatis ova-*
to-oblongis acutis villosis ciliatis, *caule subnudo*, *floribus verticillatis*.
Dec. l. c.

Crassula turríta. *Thunb. prodr.* 55. *Jacq. hort. schönbr.* 1. t. 52. *Haworth*
suppl. 17.

Turgosea turríta. *Haworth revision* 16.

This remarkable succulent plant is a native of the Karro, at the Cape of Good Hope, where it was originally found by Thunberg. It is still rare in our collections, although was described eleven years since by Mr. Haworth from the Kew Garden.

For our drawing we are indebted to C. Law, Esq., of 4 Nelson Terrace, Stoke Newington Road, by whom a specimen was communicated in May last, from his very rich collection of succulent plants. We regret to learn, tat Mr. Law is induced by ill health to wish to discontinue the cultivation of this curious tribe, and to desire to

* From *crassus*, thick; in allusion to its succulent habit.

dispose of his collection, which is one of the most interesting in the neighbourhood of London.

Usually considered a biennial; but the plant from which the accompanying drawing was taken had been in Mr. Law's possession for four years. Increased by seeds, which it ripens unwillingly, and also by offsets.

To Mr. Haworth's very careful description in the work above cited, we find nothing to add, further than that the sepals are so completely similar both in form and texture and anatomical structure to the leaves, that no distinction whatever appears to exist between them.

J.L.



CRASSULA versicolor.

Red and white Crassula.

PENTANDRIA PENTAGYNIA.

Nat. ord. SEMPERVIVÆ. *Jussieu gen.* 307.

CRASSULA. *Cal.* 5-partitus. *Cor.* 5-partita. *Caps.* 5. *Herbæ aut suffrutices; folia alterna aut opposita, interdum connata, rariùs pinnata; flores terminales fasciculati aut corymbosi aut spicati. Species tubulosæ ad COTYLEDONEM repellendæ. Id. loc. cit.*

C. versicolor, erecta ramosa; foliis oblongo-lanceolatis cartilagineo-denticulatis basi connato-vaginantibus, umbellis geminato-multifloris.

Crassula versicolor. *Burchell MSS. ined.*

Caulis *infra* sublignescens, cæterum carnosus, crassus, ad inflorescentiam usque foliosus, summitate breviter dichotomus ramo utroque florifero, nunc *infra* ramosus. Folia decussato-opposita, compacta, decrescentia, erecto-patentia, rigidiuscula, glauco-virentia, opaca, elongato-oblonga, subulato-lanceolata, longiora subbiuncialia, latitudine maximùm subsemuuncialia, crasso-carnosa, cartilagineo-miniutâ ciliata, supra planiuscula, subtus convexiuscula, basi connato-vaginantia. Inflor. compactè umbellata, terminalis, subsessilis: umbellæ contiguo-geminatæ, multifloræ; pedunculi brevissimi, bracteati bracteis subtrinis appressis, foliaceis, lineari-lanceolatis, inæqualibus, brevioribus calyce; flores sesquiunciales, noctù odoratissimi. *Cal.* $\frac{3}{4}$ uncia longus, herbaceus, cylindrico-connivens, angustus, crassus, ad usque longè *infra* medium partitus, segmentis lineari-lanceolatis, acuminatis, glanduloso-ciliatis, subviscidis. *Cor.* tubato-hypocrateriformis; tubo lineari-cylindræo, altiore calyce, subvirescente; limbo albo et puniceo variante, recurvo-rotato, subtriplo brevior tubo: pet. lineari-spathulata, ungue erecto, virescente, angusto, laminâ ovali-oblongâ, obtusâ, albâ, extis et ad latera et utrinque ad apicem puniceo-rubente. Stam. inclusa. Anth. erectæ, luteæ, oblongæ. Pist. 5, æqualia tubo, subulata, coadunata, squamâ minutâ ad singulorum basin.

A beautiful unrecorded species; very recently introduced by Mr. Burchell, Junior, who informs us that it is native of the Cape of Good Hope, and that he believes the seed was collected on the Table Mountain. The only plants of it, at present in Europe, are at the nursery of Messrs. Colville, in the King's Road, Chelsea, where the drawing was taken in July last. None of these have yet attained more than a foot in height. They flower freely, and may be considered as rather hardy greenhouse plants. The blossom gives out, as we are told, a delightful fragrance in the night. The species is intermediate between *coccinea* and *odoratissima*.

Stem inclining to be woody at the base, fleshy upwards, thick, cloathed with foliage up to the inflorescence, often

purple in the short intervals, shallowly dichotomous at the top, each branch bearing flowers, sometimes branching below. *Leaves* decussately opposite, close, decrescent, uprightly spreading, stiffish, blueishly green, opaque, elongately oblong, subulately lanceolate, the longer ones about 2 inches long, about half an inch broad at the widest, thick, fleshy, ciliate edged with an exceedingly narrow fringed cartilage, flattish at the upper side, slightly convex at the under, connately sheathing at the base. *Inflorescence* compactly umbelled, terminal, subsessile: *umbels* contiguously twin, many-flowered; *peduncles* exceedingly short, bracteate; *bractes* about three, close-pressed, foliaceous, linearly lanceolate, unequal, shorter than the calyx; *flowers* about an inch and an half long. *Calyx* $\frac{3}{4}$ of an inch deep, herbaceous, converging cylindrically, narrow, thick, parted to far below the middle; segments linearly lanceolate, acuminate, glandularly ciliate, subviscous. *Corolla* narrowly hypocrateriform; *tube* linearly cylindrical, longer than the calyx, greenish; *limb* parti-coloured, white and crimson, recurvedly spreading, about 3 times shorter than the tube: *petals* linearly spatulate; *unguis* upright, green, narrow, *lamina* ovals oblong, obtuse. *Stamens* enclosed. *Anthers* upright, yellow, oblong. *Pistils* 5, equal to the tube, subulate, united, with a small *scale* at the base of each.

The crimson red of the corolla fades as the flower remains expanded.

*DISOACTUS biformis.

Two-shaped Torch-thistle.

POLYANDRICA MONOGYNIA.

Nat. ord. CACTACEÆ; or INDIAN FIGS.

DISOACTUS (Phyllanthidæ). *Flores* e crenis caulium. *Sepala* 4 *petala* totidem latiora; omnia libera et æqualia, in tubum conniventia. *Stamina* subdefinita (12?) recta. *Stigmata* 5.

D. biformis.

Cereus biformis. *Botanical Register*, 1843. *misc.* 66.

Frutex debilis subprostratus. Rami adulti *teretes*, *spinulis stellatis parcè obsiti*; juniores *alati*, *articulati*, *crenati*, floridi *lanceolati basi teretes*, steriles *oblongi*, *sessiles*. *Flores minores, rosei.* *Sepala* 4 *linearis-ubulata, sesquipollicaria, apice recurva*; *petala totidem, æqualia, lanceolata, apice patula.* *Fructus sanguinei, ovato-lageniformes.* *Semina polita, testâ valde fragili, leviter arcuata.*

The following account of this plant is from the pen of Mr. Booth, of Carclew, to whom I am also indebted for the accompanying drawing.

It formed part of a collection transmitted by George Ure Skinner, Esq. from Honduras, in 1839, to Sir Charles Lemon, Bart. M.P. It forms a graceful bush, from two to three feet high, but will no doubt attain a much larger size if trained against a trellis, and sufficient room allowed for it to spread.

“*Stems* smooth, round, woody, and branching, about the size of a large quill, deep green. *Leaves* fleshy, oblong-lanceolate, blunt at the point, from two to three inches long, and about an inch wide, tapering to both ends, rounded a little at the base, and having large shallow serratures along the margin, which are each furnished with a single pale projecting hair. *Flowers* solitary, drooping, of a deep pink colour, usually produced at the extremity of the two-years-old leaves. *Sepals* and *petals*, eight in number, similar in form and colour, linear-lanceolate acute, about two inches long,

* From δις twice, ἴσος equal, and κακτος, in allusion to the distinctive character of the genus.

and a quarter of an inch wide, with a long narrow point. The four outer divisions, besides being more spreading and recurved, are narrower than the four inner ones, which appear to lap over one another, so as to enclose the filaments, unless near the point where they open a little and become recurved. *Filaments* one inch and a half long, very slender, deep pink, with pale yellow anthers. *Style* rather longer than the filaments, split at the point into five roundish oblong pale stigmas. *Ovary* roundish, oblong, slightly curved, and together with the tube an inch long, brownish green.

“The flowers are of short duration, but open in succession for a considerable time. The plant delights in a rich loamy soil mixed with charcoal, and is easily multiplied by means of its leaves, or bits of its stem. Like most others of its tribe it requires a warm temperature, and plenty of light.

“In the beginning of September the plant produces an abundance of beautiful little berries. They are shaped like a very small egg—the largest of them scarcely averaging the size of the common sloe—with the dried remains of the flowers attached to the point of each. The skin is smooth and glossy, semi-transparent, and of a deep purplish crimson, with several minute scales, but without any of those small spines which render the fruit of the prickly pear and other cacti so troublesome. The inside consists of a soft mucilaginous pulp, somewhat paler than the skin, having numerous small dark-brown seeds irregularly imbedded in it, and possesses a sweetish, with something of a sub-acid flavour, by no means unpleasant to the taste. Where novelty is an object, it would almost be worth while to cultivate this plant for the sake of its fruit, not that I think it will ever become of sufficient importance to rank as an auxiliary to the dessert, but for the purpose of ornamenting the varied productions of the cook and confectioner, I believe it will be found extremely useful, and on this account I venture to recommend it to the notice of such as are interested in these matters. The plant is of the easiest culture, and sets its fruit more readily than any other species I know. On the one at this place I counted nearly eight dozen ripe fruit, although the plant does not much exceed two feet in height. It had a very pretty appearance and was quite as ornamental in its fruiting state, as it was when in blossom in the spring.”

The species is a warm greenhouse plant, and should be potted in sandy loam and peat, mixed with potsherds, in order that superfluous water may pass off freely. During the summer months an ample supply of water should be given, but in winter (like other Cactaceous plants) it should be kept dry for a few weeks. It may be abundantly multiplied from cuttings in the usual way.

I must now apologize for having referred this plant to the genus *Cereus*. It is no doubt the type of a peculiar genus, and represents one of the appearances of its order, when the parts are reduced to the smallest denomination. In general, Indian figs are remarkable for the intermingled manner in which the parts of the flower are arranged, as well as for their large number; it is only in the *Rhipsalidæ* that they assume a constant and definite proportion, and even then the sepals and petals are often distinguished with difficulty. Here, on the contrary, the number of sepals is constantly four, that of the petals the same; and there seems to be no disposition to vary from those proportions. For these reasons it seems to claim rank as a genus upon better grounds than the majority of those admitted by modern Botanists. It in fact connects the tribes of *Phyllanthidæ* and *Rhipsalidæ*, resembling the former in its general habit, large showy flowers, and many-seeded fruit; and claiming kindred with the latter by virtue of its equal-parted flowers, definite stamens, and permanent flowers, which shrivel up and cling to the end of the fruit when ripe.

It has been well observed by Dr. Walpers (*Repertorium Botanices systematicæ*, vol. 1. p. 269) that the confusion of species and names, in the order of Indian Figs is without a parallel, owing to the negligence or bad descriptions at once of writers, cultivators, and travellers, and that the so-called species are in many cases distinguished by characters of the most trifling nature. The first step to take in sweeping out this Augean stable is to limit the Genera by solid characters; a task which has been undertaken by the Prince of Salm Dyck, with more success than any one. As it will probably be agreeable to the readers of the Botanical Register to know what that arrangement is, the following brief abstract is taken from the work of Dr. Walpers. The details will be found in the *Cactææ in horto Dyckensi cultæ auctore Principe a Salm*

Dyck (Dusseldorf, 1842, 8vo.) I have a little varied the terminations of the names of the Tribes, as part of a plan for reducing all Botanical terminology to one standard; the details of which will be worked out in a new edition of the Natural System of Botany now passing through the press.

	Number of species included in each genus.
Tribe 1. MELOCACTIDÆ.	
1. Melocactus <i>C. Bauhin</i>	15
2. Discocactus <i>Pfeiffer</i>	.1
3. Anhalonium <i>Lemaire</i> .	.1
<i>Ariocarpus</i> Scheidweiler.	
4. Mammillaria <i>Haworth</i>	138
Tribe 2. ECHINOCACTIDÆ.	
5. Echinocactus <i>Link & Otto</i>	76
<i>Astrophytum</i> Lemaire.	
Tribe 3. CEREIDÆ.	
6. Echinopsis <i>Zuccarini</i> .	11
7. Pilocereus <i>Lemaire</i>	.2
(This includes <i>Cereus sessilis</i> .)	
8. <i>Cereus</i> <i>Haworth</i>	127
Tribe 4. PHYLLANTHIDÆ.	
9. Phyllocactus <i>Link</i>	.7
(This includes <i>C. Ackernanni</i> and <i>speciosus</i> .)	
10. Epiphyllum <i>Pfeiffer</i>	.1
11. Disocactus <i>Lindley</i>	.1
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Miss Drake. del.

Pub. by J. Ridgway 169 Piccadilly Aug. 1. 1835.

J. Watts. sc.

* DÝCKIA rariflóra.

Scattered-flowered Dyckia.

HEXANDRIA TRIGYNIA.

Nat. ord. BROMELIACEÆ, Juss. (*Introduction to the Natural System of Botany*, p. 256.)

DYCKIA.—*Schultes fl.* Calyx tripartitus; laciniis erectis concavis. Corolla urceolato-campanulata; petalis erectis rhomboideis carnosis basi nudis. Stamina basi monadelphæ; antheris erectis. Ovarium superum, tripartibile, polyspermum; stylis tribus stigmatibusque totidem dilatatis complicatis fimbriatis; ovula disticha.—Folia carnosa, epidermide crassâ corneâ paululum lepidotâ vestita, margine spinosa.

D. *rariflora*; foliis lineari-lanceolatis recurvo-patentibus, spicâ rariflorâ, spathe scapi ciliolato-serrulatis, floralibus calycem ætiusculum subæquantibus. *Schultes fil. in Rom. et Sch. Syst. veg. v. 7. p. 1195. Graham in Jameson's Journal, July, 1835, p. 202.*

Introduced from the Berlin Garden by the Horticultural Society in 1833. This plant is a native of the Serra of Villa Rica, in Brazil, where it and two more species were discovered by the indefatigable travellers Spix and Martius. It flowers in June and propagates very slowly by offsets, after the manner of an Aloe, with which it agrees in many of its habits.

* Named in compliment to his Highness the Prince of Salm—Reifferscheid-Dyck, a great lover of Gardening, and one of the most liberal and intelligent of the noble patrons of science of the present day.

The dry stove seems to suit it, for there it produces its rich orange flowers in great perfection, and retains them in all their freshness and beauty for several weeks.

We do not understand upon what principle this genus is referred to the Linnæan *Hexandria Monogynia*, instead of *Trigynia*, for it unquestionably has 3 distinct styles; unless it is to be considered a new case of the necessity of understanding the natural affinities of plants in order to use the sexual system.

Few persons, when they look at the leaves of a plant, ever think of the curious internal mechanism by which all its vital actions are put and maintained in motion; and yet there is not in the whole range of the creation a more singular object than a leaf, nor one whose structure is a more admirable instance of design and forethought. The internal anatomy in this species is highly curious and very easily examined. It consists as usual of a quantity of cellular matter enclosed in a cuticle, but the arrangement of the parts, which is most uncommon, is probably connected with the habits of life of the species in its native wildernesses. The cuticle is hard and composed on the upper surface of three, and on the lower of five layers of extremely minute compact cubical cells. The leaf itself is plane above and convex below; corresponding with the convexity is a stratum of equal thickness of dodecahedral cells, which are green, and pierced towards their upper side by the parallel veins of the leaf; above this structure is a very thick planoconvex bed of hard prismatical cells, which are planted nearly perpendicularly below the cuticle; so that when the section of the leaf is viewed by the naked eye it appears, as

is indicated in our figure, as if it consisted of a common thin channelled leaf, whose concavity is filled up by cartilaginous matter. It is also worthy of remark, that in the lower stratum the tissue below each vein is much more lax and cavernous than that which is interspersed between the veins. The stomates are small and imperfect, and occupy a double or triple line in each furrow, lying concealed among the scurfiness.



Brickellia

Painted by J. H. K. Rowley 1865. Brackets. Nov. 1. 1865.

G. Rowley 50

ECHEVĚŘIĚ acutifolĚ.

Sharp-leaved Echeveria.

DECANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ.

ECHEVERIA. *Botanical Register*, vol. 15. t. 1247.

E. acutifolia; caulescens, foliis subrhombeis acutissimis concavis in apice ramorum rosulatis, paniculā densā cylindraceā ramulis 3-4-floris, sepalis acutis quam petala multō brevioribus.

Suffrutex carnosus, omninō *E. gibbifloræ* vultu ante anthesin, foliis autem magis concavis et multō acutioribus. Flores in paniculam contractam cylindraceam vix ultra sex pollices longam ordinati, luteo-coccinei, ramulis rigidis brevibus ascendentibus 3-4-floris. Sepala linearia, carnosa, acuta, petalis lanceolatis duplō breviora.

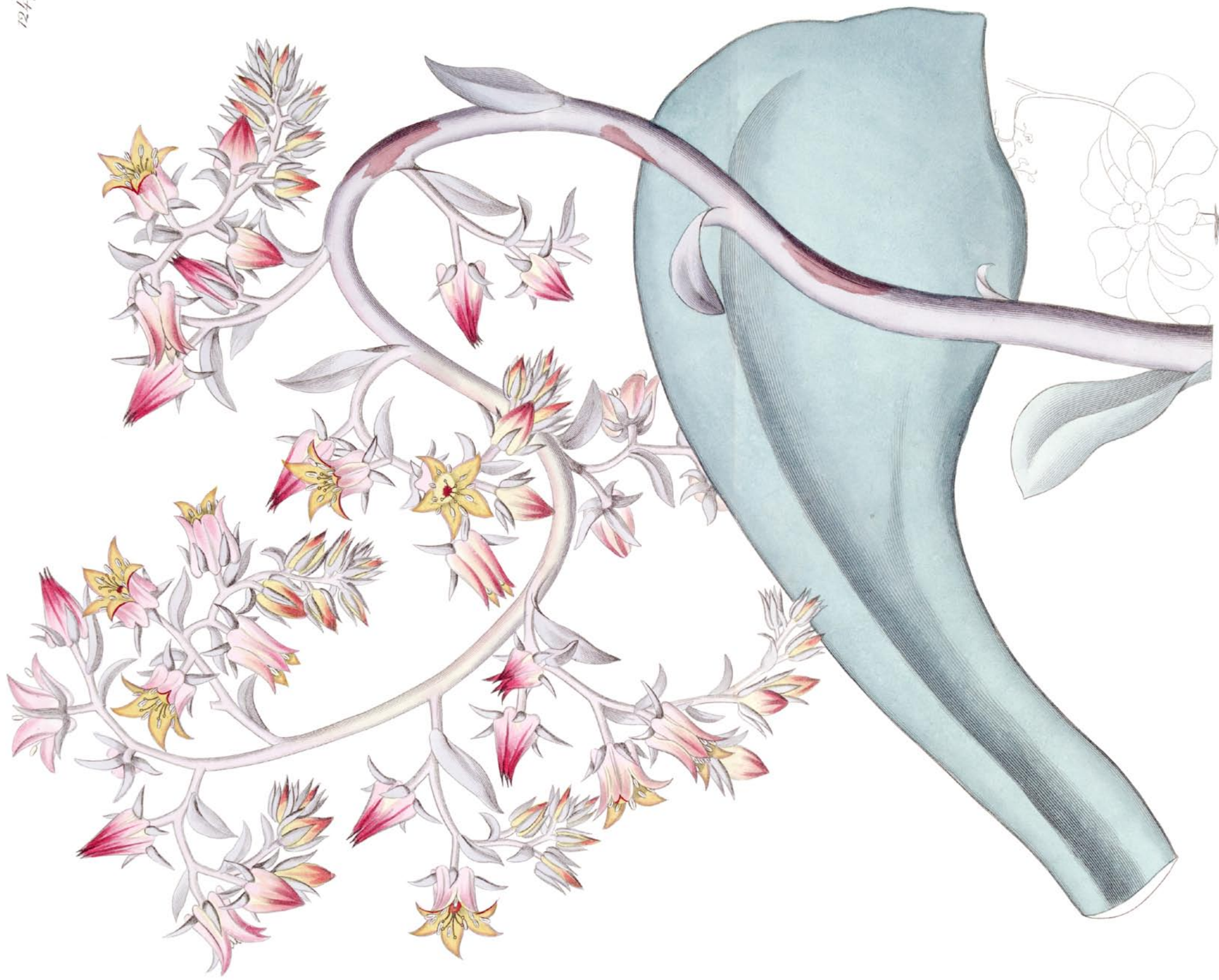
Among the plants found by Mr. Hartweg during a short visit to Oaxaca, in Mexico, was this pretty species, whose succulence and tenacity of life enabled its stems to reach Europe alive. When it was first received by the Horticultural Society it was mistaken for *E. gibbiflora*, but upon flowering it proved to be a very different and much more handsome species.

The differences between the two are as follows. The leaves of *E. acutifolia* are acute, in *E. gibbiflora* they are obtuse; in the former too they are much more green and richly touched with scarlet than in the latter. In *E. acutifolia* the flowers are disposed in a short narrow erect cylindrical panicle, and they are of rich scarlet tinged with yellow; in *E. gibbiflora* they grow in a loose rambling panicle, and are much less brilliantly 'coloured. Finally, the lateral branches of *E. acutifolia* are short, straight, and only bear three or four flowers in a corymbose manner at the end; while in *E. gibbiflora* they grow all along one side of long drooping zigzag many-flowered shoots.

For the mode of cultivation see t. 22 of this volume.

May, 1842.

M



ECHEVÉRIA* gibbiflora.

Gibbous-flowered Echeveria.

DECANDRIA PRNTAGYNIA.

Nat. ord. CRASSULACEÆ.

ECHEVERIA.—*Calyx* 5-partitus, sepalis folia referentibus erectis, imâ basi subconcretis. *Petala* 5, infernè coalita, erecta, crassa, rigidula ad nervum medium crassiora et ferè basi trigona, acuta. *Stamina* 10, petalis breviora, basi cum petalis concreta. *Squamæ* 5, breves, obtusæ. *Carpella* 5, in stylos subulatos abeuntia.—*Frutices carnosî* Mexicani. Folia *alterna, caulina, aut rosulata, subopposita, integerrima, enervia*. Flores *secùs rachin, aut secùs cymæ ramos sessiles, coccinei aut flavi*.—Dec. prodr. 3. 401.

E. gibbiflora; foliis planis cuneiformibus acutè mucronatis ad apices ramorum confertis, paniculâ patente, floribus secùs ramos breviter pedicellatis.—Dec. prodr. 3. 401. *Mémoire sur les Crassulacées*, p. 29. t. 5.

Frutex carnosus, floridus, 2-3-pedalis, foliis ad apicem caulis brevis rosulatis, carnosis, glaucis. Racemus *compositus, flexuosus, bracteis inferioribus majoribus, foliaceis*. Petala *aurantiaca, basi inter sepala producta pallidiora*.

A very handsome succulent plant, belonging to a small tribe peculiar to the Flora of tropical America. It lives readily in the Greenhouse, where it flowers in November and December.

Our drawing was made in 1828, in the Garden of the Horticultural Society, where it had been raised from seeds collected on the western coast of South America by Mr. James M'Rae.

M. Decandolle says it is a native of Mexico.

* Named in honour of M. Echeveria, a skilful Botanical painter, who executed many of the finest designs of the Mexican Flora, commenced under the direction of MM. Sessé, Mocino, and Cervantez.

A fleshy shrub, when in flower 2 or 3 feet high. *Leaves* rosulate at the top of a short stem, fleshy, glaucous. *Raceme* flexuose, compound, with large foliaceous bractæ. *Petals* orange-coloured, their bases elongated beyond the sinuses of the calyx, paler than the rest.

J. L.



ECHEVERĪĀ lūrīdā.

Lurid Echeveria.

DECANDRIA PENTAGYNIA.

Nat. Ord. CRASSULACEÆ.

ECHEVERIA. Botanical Register, vol. 15. t. 1247.

E. lurida; foliis rosulato-confertis oblongis concavis glaucis discoloribus, racemo apice nutante, floribus pedunculatis.

This plant is in many respects similar to *E. secunda*, being like that species stemless, with the leaves collected into a circular patch, in the manner of a House-leek. It differs however in having longer and more blunt leaves, which are deeply stained with dull purple. The flowers too are a richer scarlet.

The genera *Echeveria*, *Cotyledon*, and another or two of the Crassulaceous order are truly monopetalous, that is to say, their petals are united by the edges into a single organ; and yet the Crassulaceous order is arranged in the Polypetalous division of the Natural System of Jussieu. What are we to infer from this? Is it that *Echeveria* and the others are not Crassulaceous? or that the distinction between Monopetalous and Polypetalous structure ought not to be taken as a fundamental character by which to classify plants?—The latter is surely the inevitable conclusion; and there can be no doubt that the first step to be taken in arriving at a truly natural system of classification, is to discover some means of dispensing with modifications of so unimportant an organ as the corolla, in framing the distinctive characters of the higher systematic divisions under which the natural orders are to be grouped.

A hardy greenhouse perennial, requiring about the same treatment as the various species of Fig Marygolds, and smaller Crassulas; that is, it should be kept in small pots, well drained, and filled with a mixture of leaf-mould and brick-rubbish, covering the surface of the pot with silver sand.

January, 1841.

B

The plant should be kept in the greenhouse during summer, for if placed out of doors it is liable to suffer from excess of moisture.

It is increased freely, as every leaf with a bud at the base will soon form a good plant, if treated in the ordinary way.

The following characters of some Orchidaceæ will serve to occupy an empty space in our pages.

MICROSTYLIS *caulescens*; caule elongato folioso, foliis lanceolatis basi angustatis, racemo laxo multifloro cernuo, pedicellis filiformibus bracteis longioribus, labello acuminato intra basin biaurito.—The only caulescent species yet described. The stem is about four inches long, and is covered with ten or twelve distichous leaves. The flowers are very small, green, in a thin raceme, about three inches long.—*Found by the late Colonel Hall in Peru, in the valley of Lloa, at the elevation of 8000 feet above the sea.* (Herb. Hooker.)

ISOCHILUS *grandiflorum*; vaginis imbricatis, foliis distichis lineari-lanceolatis acutissimis, floribus solitariis axillaribus, bractea acuminata sepalum dimidio aequali, sepalis acuminatissimis, petalis duplo brevioribus conformibus, labello lineari-oblongo utrinque emarginato basi nudo, columna petalis parum brevior.—This is very like *I. graminifolium*, but the flowers are four times as large, independently of the distinctions included in the foregoing character.—Good specimens exist in the Royal Herbarium of Munich, collected in *Peru by Hænke*; but I find nothing like it in the Reliquiæ Hænkeanæ.

ISOCHILUS *graminifolium* (Humb. Bonpl. & Kunth, nov. g. et sp. pl. 1. 340. t. 78.); vaginis imbricatis foliis distichis lineari-lanceolatis acutissimis, floribus solitariis axillaribus, bractea acuminata pedunculo brevior, sepalis aristatis, petalis conformibus duplo brevioribus, labello lineari-oblongo utrinque emarginato basi callo magno duro oblongo, columna petalis duplo brevior.—When not in flower this is undistinguishable from *I. grandiflorum*. It is well figured in Humboldt and Bonpland's work, excepting the analysis, in which the form of the labellum is inaccurate, and the presence of a hard oblong callus, called a purple stain in the description by M. Kunth, is overlooked.—*Peru, Mathews, 1064; Trunks of trees near Lloa, Jameson.* (Herb. propr. & Hooker.)

LÆLIA *caulescens*; folio coriaceo lineari-oblongo caule tereti longiore, scapo elongato tereti e spatha membranacea cylindracea erumpente, racemo subdecemfloro, bracteis squamæformibus erectis rigidis striatis, sepalis petalisque subæqualibus lineari-lanceolatis acutis, labelli postici nudi lobo intermedio obtuso crispo lateralibus parum longiore.—A species very near *L. cinnabarina*. The flowers are apparently purple, and about the size of *L. rubescens*. The lip is perfectly destitute of all elevations or inequalities. In the herbarium of von Martius is a smaller plant from the same locality, with a three-flowered raceme, and much shorter leaves; apparently it is a mere variety.—*From the Serra de Piedade in the province of Minas Geraes in Brazil* (herb. Martius).



ECHEVERIA retusa.

Blunt-leaved Echeveria.

DECANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ. (HOUSELEEKs, *Vegetable Kingdom*, p. 344.)

ECHEVERIA, DC.—*Calyx* quinquepartitus, laciniis foliiformibus, erectis. *Corolla* perigyna, quinquepartita, laciniis erectis, crassis, rigidulis, nervo medio incrassato, basi subtrigonis, acutis. *Stamina* 10, imæ corollæ inserta, inclusa. *Squamæ hypogynæ* breves, obtusæ. *Ovaria* 5, libera; unilocularia, ovulis ad suturam ventralem plurimis. *Capsulæ* folliculares 5, in stylos subulatos attenuatæ, liberæ, intus longitudinaliter dehiscentes, polyspermæ.— Frutices *mexicani*, *carnosi*; foliis *alternis caulinis* v. *rosulatis suboppositis*, *integerrimis*, *enerviis*, *floribus secus rhachin* v. *secus cymæ ramos sessilibus*, *coccineis* v. *flavis*.— Endl. gen. 4621.

E. retusa; foliis obovato-spathulatis demum sparsis vetustis retusis glaucis crenulatis caulinis lineari-oblongis integerrimis basi solutis, paniculâ densâ subcorymbosâ ramis paucifloris, sepalis linearibus inæqualibus corollâ brevioribus, petalis carinatis acutis basi gibbosis.—*Lindley in the Journal of the Horticultural Society*, vol. 2. p. 306.

We learn from the Journal of the Horticultural Society that this species was “ raised from seeds, received from Mr. Hartweg in February, 1816, and said to have been collected on rocks near Anganguco, in Mexico.

“This is a dwarf species, not unlike a contracted form of *E. Scheerii*. Its leaves are originally closely imbricated, but are never truly rosulate, and by degrees separate as the stem lengthens; they are broad at the point, but acute when young, but when old are extremely blunt, and irregularly crenated, as well as bordered with purple. The flower-stem is from nine inches to a foot high, and bears at the very summit a compact panicle of handsome crimson flowers, covered with a delicate bloom, and orange-coloured inside.

“It is a pretty greenhouse, half-shrubby plant, and grows freely in a light mixture of sandy loam with leaf-mould and plenty of sand. It is easily increased by the leaves, ris-

es from one to two feet in height, and flowers freely from November to April, that is to say, throughout the winter.”

Its name has been given it in consequence of the peculiar form of the old leaves; while young they are sharp-pointed; at all times they are bordered with red.



Nov. 1870. 1871.

Pub. by J. Radgway 184 Broadly, April 1. 1871.

G. Barclay del.

* ECHEVĚŘIĀ rōsěă.

Rosy Echeveria.

DECANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ.

ECHEVERIA. Botanical Register, vol. 15. t. 1247.

E. rosea; caulescens, foliis ovalibus erectis acutis nunc terminalibus rosulatis nunc imbricatis, spicâ cylindraceâ densissima, bracteis inferioribus coloratis lanceolatis basi angustatis triquetris corollis longioribus, sepalis linearibus acuminatis corollæ campanulatæ sequalibus.

Caulis *carnosus, teres, pedalis, ramosus, lutescens*. Folia *carnosa, ovalia, basi angustata triquetra; in apicibus ramorum steriliū aggregatis viridibus roseo-marginatis, aut secus ramos floridos imbricatis roseis*. Sepala *linearia, acuta, rosea, corolla campanulate 5-partitæ æqualia, bracteis linearibus ipsis equalibus suffulta*. Stamina 10, *corollæ basi inserta*. Carpella 5, *acuminata, squamis nullis hypogynis*.

A Mexican herbaceous plant, imported by Messrs. Lee and Co. of the Vineyard, Hammersmith, and by them presented to the Horticultural Society, in whose garden it flowered in April, 1841.

From *E. gibbiflora* its short compact inflorescence distinguishes it, as well as the yellow flowers with rose-coloured bracts, which render it very gay. There is indeed but one species yet described in which the corolla is yellow, and that, being the old *E. cæspitosa*, is a quite different stemless plant.

It is a pretty green-house plant, requiring the same management as *Crassulas* and succulents of that kind. It does best when grown in a very light house, and the leaves, bracts and flowers acquire that deep colour which is so beautiful in some of the species of this family. It strikes readily either from leaves or from cuttings, and should be grown in a light and well-drained soil.

* See folio 1247.

April, 1842.



* ECHEVĚŘIÄ secũdă.

One-sided Echeveria.

DECANDRIA PENTAGYNVIA.

Nat. ord. CRASSULACEÆ.*ECHEVERIA. Botanical Register, vol. 15. t. 1247.*

E. secunda; foliis rosulato-confertis cuneatis mucronatis pinguibus glaucis, racemo secundo recurvo, floribus longe pedunculatis. *Bot. Reg.* 1838. *misc.* 112.

So full an account has been given by Mr. Booth of this plant at no. 112 of the miscellaneous notices of the Botanical Register for 1838 that little remains to be added.

It has now been cultivated for some time in the garden of the Horticultural Society, where it was received from Sir Charles Lemon, Bart. and it proves a very beautiful green-house plant, of the easiest management, remaining in flower during many weeks in the summer. It would doubtless succeed perfectly well in a sitting room, with Aloes, Stapelias, and such plants; only it is necessary that it should be fully exposed to the hottest sun for as long a period of the summer as possible, otherwise it will become drawn, and its colours will want brightness.

Care too must be taken that the pot in which it is placed is thoroughly drained of superfluous moisture, by means of a deep layer of broken pottery; for it is more liable to suffer from damp than from drought.

From Its sides below the leaves there spring many young branches, or suckers, as in the common Houseleek, and by those it is freely multiplied, each sucker forming a plant if potted in silver sand.

Now that communications with Mexico are so frequent, we ought to expect many more species of this genus, all of which are worth the cultivator's care. *E. coccinea*, with a leafy spike of scarlet flowers, yellow inside; *E. teretifolia*, whose flowers are of the same colour, but whose leaves are tapering, still remain to be introduced; and even the old *E. cespitosa*, with the habit of the species now figured, but with yellow stalkless flowers, is seldom or never seen, although cultivated years ago. In addition to these there are several species not yet described, to which, from the general beauty of the genus, some importance is to be attached.

1707.



Mr. Drake acc.

Fac by J. Rudgway. 1844

Secondly, I've

1. 1834

P. Walthe. 0.

* ECHINOCÁCTUS Eyriésii.

Sweet-scented Spiny Cactus.

 ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ. Juss. (Introduction to the Natural System of Botany, p. 54.)

ECHINOCACTUS Link et Otto. Omnia Cerei, sed caulis umbilicatus v. globosus.

E. Eyriesii; caule subgloboso umbilicato, costis 13 continuis acutatis subundulatis, tuberculis lanatis spinas breves rigidas rectas gerentibus, flore bucciniformi curvato 6 uncias longe odoratissimo extus cinereo viloso, petalis acutissimis stellatis.

E. Eyriesii. Otto in verhandl. Preuss. Gart. ver. c. ic.

We do not find any mention of this remarkable species in the treatises of either Martius, Link and Otto, or De Candolle; but we believe it is published with a figure in the Transactions of the Prussian Horticultural Society, a work we do not happen to have at hand.

It was presented to the Horticultural Society some years since by Sir John Lubbock, who had procured it from Mexico, where the genus seems to exist in great numbers; it flowers at various seasons, and now and then forms an offset.

Independently of the large size of its flowers, which rival in dimensions those of the *Cereus* tribe of Cacti, it is remarkable for the rich delicious odour they exhale at night, at which time its glorious blossoms expand. When young they resemble long sooty-grey horns covered over with a thick shaggy hairiness, and would never be suspected

* The form of the marine animals called Echini has naturally suggested the application of their name to plants which so much resemble them.

to conceal a form of the utmost beauty, or a clear and delicate complexion. When the hour of perfection has arrived, and the coarse veil of hair begins to be withdrawn by the expansion of the unfolding petals, one is amazed at the unexpected loveliness which stands revealed in the form of this vegetable star, whose rays are of the softest white, while the disk is of a rich yellow formed by the stigma and the clustering anthers.



* ECHINOCĀCTUS Eyriēsī, *var. glaucus*.

Glaucous Sweet-scented Porcupine Cactus.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTACEÆ.

ECHINOCACTUS Bot. Reg. vol. 20. fol. 1707.

E. Eyriesii. Supra l. c.

Var. *glaucus*; angulis acutioribus, spinis magis fuscia et tenuioribus, tubo calyci viridi glabriusculo.

There is a specimen of this pretty plant in the garden of the Horticultural Society, but its origin is not known. It is very similar to the *E. Eyriesii* figured in the 20th volume of this work, fol. 1707; but differs in having the angles much more acute and less wavy; the spines are longer, more slender, and rather browner, and the tube of the flower is shorter, green, and free from the long coarse ash-coloured shagginess which distinguishes the original 4 species.

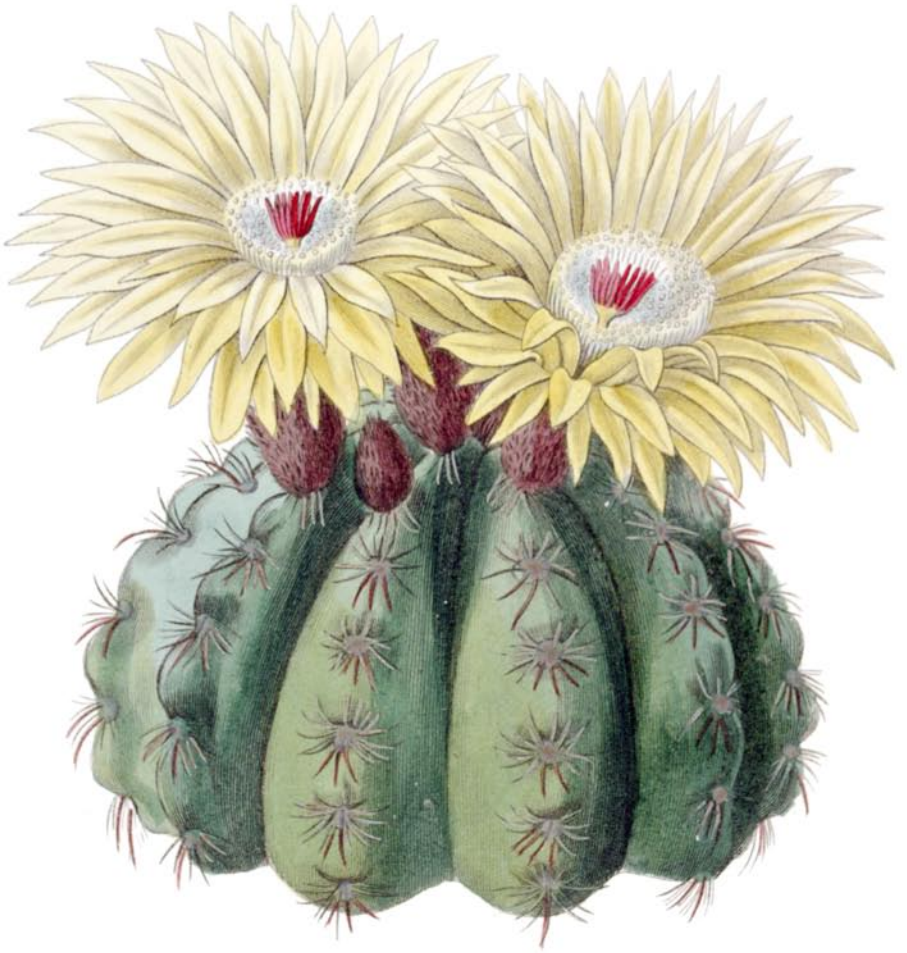
There seems to be no trace of it in the works of continental writers. It is not mentioned in the recent catalogue of Dr. Louis Pfeiffer, nor do I succeed in referring it to any species mentioned in the writings of more technical botanists. The flowers are sweet-scented, and appear in July.

The division of Cactaceæ to which this belongs should be treated in a somewhat different manner from, the more common kinds. The soil should neither be very rich nor retentive of moisture; broken bricks or lime-rubbish, mixed with a little leaf-mould, answers the purpose very well. Water should never be given over-head, because in that

* See Bot. Reg. vol. xx. fol. 1707.

case it collects in the hollow cavity on the top, and rots the centre of the plant; and it should not be given at all, except when an inclination for growth is manifested.

This variety seldom throws out young shoots, and consequently does not increase rapidly; but if young plants are of more value than a large specimen, it may be cut across, when the top may be grafted or struck, and the under part will send out young shoots. When seeds can be procured they should be sown in silver sand, and placed in a warm and shaded situation, where they will soon vegetate.



* ECHINOCĀCTŪS Ottōnīs.

Mr. Otto's Spiny Cactus.



ICOSANDRIA MONOGYNIA.

Nat. ord. CACTACEÆ.

ECHINOCACTUS. Bot. Reg. vol. 20. fol. 1707.



- E. *Ottōnis*; caule subrotundo, costis obtusiusculis distantibus, fasciculis spinarum distantibus subuliferis medio villosis, spinis 3-4 cæteris longioribus, tubo calycis obconico tomentoso fusco petalis luteis acutissimis æquali.
 E. *Ottōnis. Link et Otto Gewachs. Berl. t. 16. Bot. Mag. t. 3107. Pfeiffer Cact. p. 48.*

A very pretty species of this curious genus; according to Sir W. Hooker a native of Brazil, but according to Pfeiffer a Mexican plant.

It is not at all uncommon in collections, where it regularly flowers in July and August.

The annexed figure was made in the garden of the Horticultural Society,

* See Bot. Reg. fol. 1707.



* ECHINOCÁCTUS oxygónus.

Sharp-angled spiny Cactus.

 ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ Juss. (Introduction to the Natural System of Botany, p. 54.)

ECHINOCACTUS. Supra, fol. 1707.

E. *oxygonus*; glaucescens subglobosus 14-angularis, costis acutis repandis spinis patulis inæqualibus, flore longissimo. *Link et Otto in Verhandl. des Pr. Gart. Vereins, vol. 6. t. 1.*

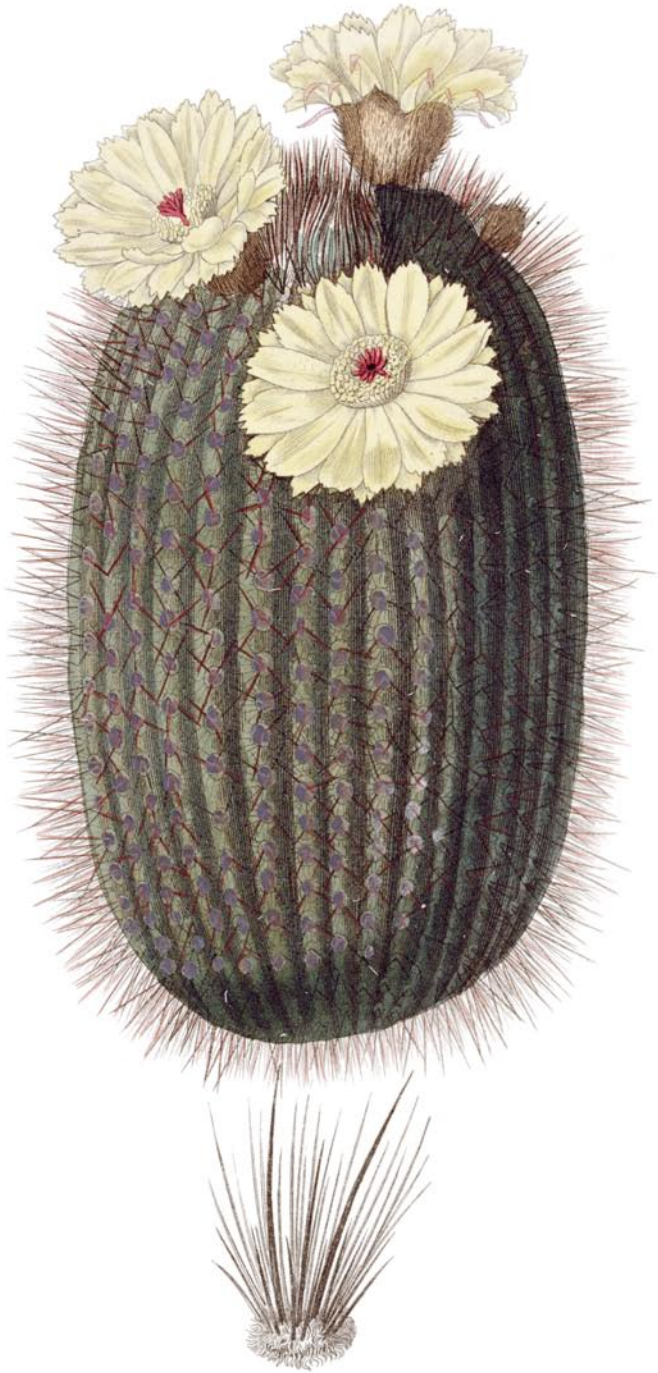
We have been favoured by Mr. Frederick Mackie with the figure of this species, which he received along with a large number of other rare and valuable succulent plants, belonging to the unrivalled collection of Mr. Hitchin, which he has recently added to his Nursery at Norwich.

The flower remained expanded about 48 hours. The species is thus described in the Transactions of the Prussian Horticultural Society:—

“The stem is from 10 inches to a foot in height, nearly 10 inches in diameter on the top, somewhat smaller below, and nearly of a globular form, of a bluish-green colour. Its ribs, which are fourteen, rise from a broad base, running into an acute edge. The furrows are somewhat sharp; spines about 14, various sizes, the outer generally larger, the inner smaller; those more or less divaricate from each other, these standing up nearly perpendicular; all of a brown colour, cone-like, not flat, the younger surrounded

* See folio 1707.

by a tomentum, which is more or less wanting in the older. The flowers proceed from the furrows about the middle of the stem; are nearly a foot long; reversed, cone-shaped; the tube somewhat curved; firmly attached to the germen; exteriorly covered with leaflets; the lower are small and red, increasing upwards in size, and at last terminating in the petals, which are broad, lance-shaped, and of a rose-colour. The stamens are numerous, and every where internally attached to the tube, shorter than the flower. The stigma is multifid and equal to the stamens. We received this plant from Mr. Sello, from the Brazils, without giving its strict habitat."



Miss Drake del.

Pub. by J. Ridgway 169 Finsbury May 1 1839

S. Barclay sc.

ECHINOCĀCTŪS Scōpă.

The Broom Cactus.

ICOSANDRIA POLYGYNIA.

Nat. ord. CACTACEÆ.*ECHINOCACTUS.* *DeCand. Prodr.* 3. 461. *Revue des Cactées*, p. 35.

E. Scopa; caule oblongo multicostato, fasciculis spinarum approximatis basi lanatis, subulis extimis 30 40-debilibus albis centralibus 3-4 purpurascenscentibus rigidis, petalis biseriatis luteis apice serratis.

Cactus Scopa. *Link enum. plant. hort. berol.* ii. 21.*Cereus Scopa.* *Princeps Salm-Dyck in DeCand. prodr.* iii. 464.*Echinocactus Scopa.* *Hort. Berol. fide Pfeiffer Cact.* p. 66.

A native of Brazil, whence it was many years since sent to Prussia, and thence distributed through other parts of Europe. It derives its name of the Broom Cactus from having the hairs of its stem so long and stiff as to resemble that instrument. Dr. Pfeiffer mentions two varieties, one with all the hairs white, the other with the central ones purple, as in the accompanying figure.

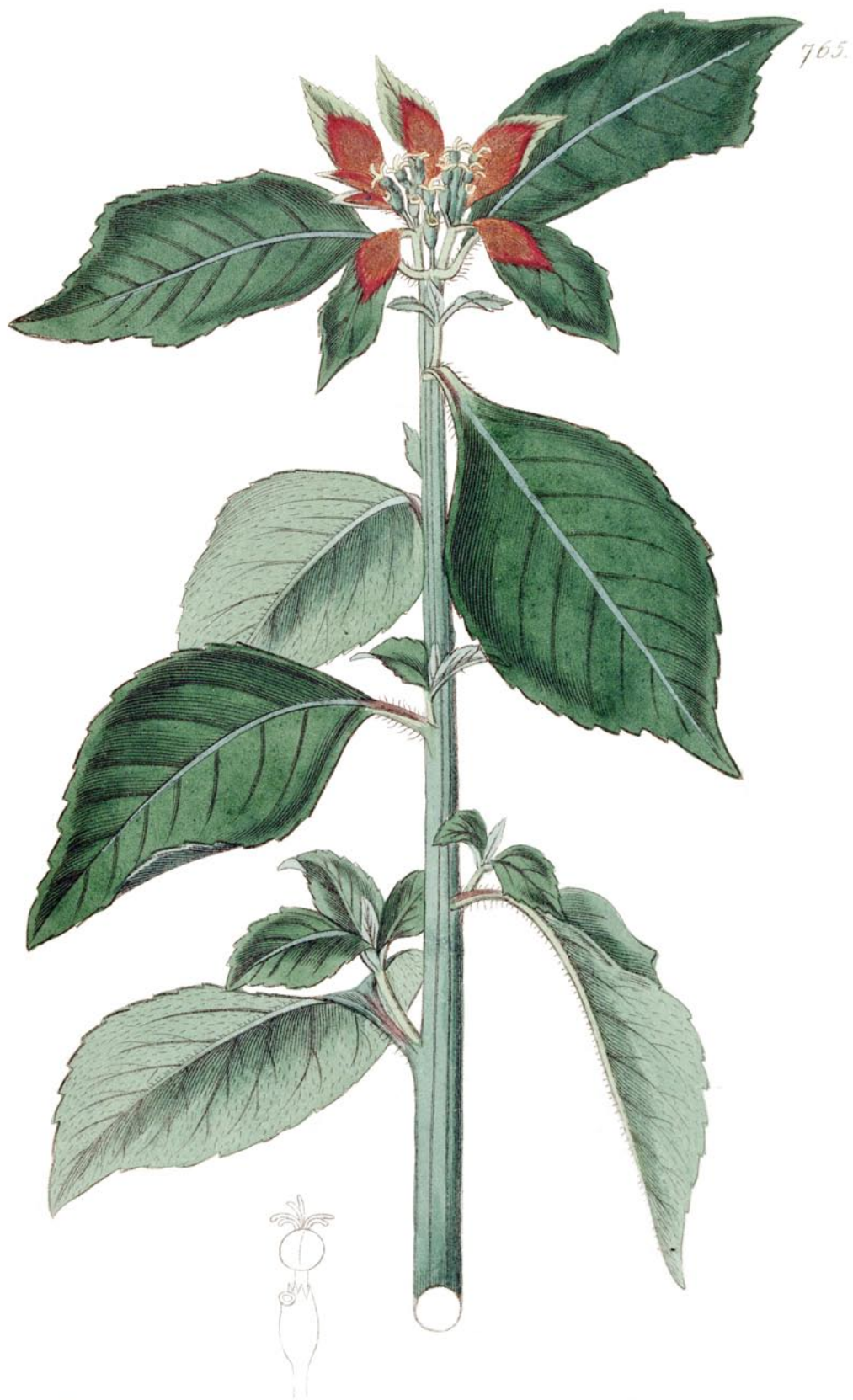
The latter was taken from a specimen which flowered in the valuable collection of Thomas Harris, Esq. of Kingsbury.

Some explanation of my having placed this plant and the two species formerly represented in this work, in the same genus, seems to be required. After eliminating the *Melocacti* because of their producing their flowers in the woolly receptacle peculiar to those plants, the *Mammillarias* on account of their tubercles not being confluent into ridges, and the *Opuntias* because of their rotate flowers and leafy spiny sepals, there remains a considerable number of species formerly included under the old genus *Cactus*, which modern writers have divided between the two genera *Cereus* and *Echinocactus*. Now this partition may be effected in two ways; ei-

ther the whole of the species with ribbed, and round or oblong stems may be placed in *Echinocactus*, and the rest in *Cereus*, without regard to the flowers; or all the long flowered species may be placed in *Cereus*, and those with short flowers in *Echinocactus*, without regard to habit. In either case there are difficulties, for there are species whose flowers are intermediate between the long-tubed and short-tubed forms, and others whose stems are intermediate between the round and the cylindrical, or flattened or long condition. On this account it seems to me better to take the stem as the distinctive character, because it is the most obvious, unless it should be thought better to combine *Echinocactus* and *Cereus* into one genus.

The seeds should be sown in silver-sand and very slightly covered; they should then be placed in a dry bottom heat and covered with a bell-glass. The young plants should be potted in pots of the smallest size, well drained, and chiefly in sand. Afterwards the soil used should never be too rich, and well mixed with broken stones or bricks. The plant may be preserved in a cool dry house where the temperature is very low, but a slight bottom heat in the growing season will always be found to suit it best.

It seldom sends out shoots from its sides, and therefore it is difficult to obtain cuttings; but where propagation is of more consequence than a specimen plant, it should be cut across, when the top part will form one plant, and the bottom will send out shoots from the sides of the cut. Cuttings should be treated precisely in the same way as seedlings.



EUPHORBIA cyathophora.

Cup-appendicled Spurge.

DODECANDRIA TRIGYNIA.

Nat. ord. EUPHORBIAE. *Jussieu gen.* 385. *Div.* Styli plures definiti, saepiùs tres.

EUPHORBIACEAE. *Brown in Flind. voy.* 2. 557.

Div. II. Fruticosæ, inermes. Caulis nec dichotomus, nec umbelliferus.

E. cyathophora, inermis, foliis panduriformibus ovatis, floribus terminalibus subumbellatis, involucellis coloratis. *Willd. sp. pl.* 2. 891.

Euphorbia cyathophora. *Murray in comment. goett.* 7. 81. *t.* 1. *Jacq. ic. rar.* 3. *t.* 480.

Euphorbia heterophylla. *Jacq. collect.* 1. 157.

Distincta ab EUPHORBIA heterophyllâ foliis superioribus nunquam lanceolatis. Variat involucris rubris et albis. Willd.

We shall say more of this species in our next number, which will contain Appendix.



EUPHORBIA punicea, *Scarlet Spurge.*

DODECANDRIA TRIGYNIA.

Nat. ord. EUPHORBIÆ. *Jussieu gen.* 385.

Div. I. Styli plures definiti, sæpius tres.

EUPHORBIA. Hermaphrodita. *Cal.* 1-phyllus turbinatus, limbo 4-5 dentato, dentibus inflexis. *Petala* 4-5, calyci alterne dentibus calycinis externe inserta, forma varia, crassiuscula, nunc glanduliformia, nunc simplicia, nunc 2-3-fida aut rariùs multifida. *Stam.* indefinita 12 aut plura, rariùs pauciora; *filamenta* receptaculo inserta, medio articulata, diverso tempore erumpentia; *antheræ* didymæ. Istis fertilibus interjiciuntur alia sterilia paleacea aut squamosa, definita aut sæpiùs indefinita, simplicia aut sæpiùs ramosa vel fimbriata. *Germen* inter stamina centrale stipitatum 3-gonum; *styli* 3. *Capsula* stipite reflexo extrà calycem nutans 3-cocca 3-sperma. *Plantæ lactescentes, herbaceæ aut fruticosæ, erectæ aut rariùs repentes, aphyllæ aut sæpiùs foliosæ.* *Jussieu gen.* 385; (nonnullis variatis).

E. punicea, umbella quinquefida; trifida, involucellis ovalibus acuminatis coloratis, capsulis glabris foliis obovato-lanceolatis subtus glaucis. *Swartz prodr.* 76.

Euphorbia punicea. *Swartz ind. occid.* 2. 873. *Hort. Kew.* 2. 143. *ed.* 2. 3. 167. *Smith ic. pict.* 3. *Jacq. ic. rar. t.* 484. *coll.* 2. 179. *Willd. sp. pl.* 2. 916.

A favourite decoration of our hothouses. Introduced from Jamaica in 1778, by Mr. Wallen. It is a smooth fleshy-wooded milky shrub, attaining sometimes the height of seven feet. In the present specimen Mr. Edwards appears to have met throughout with only two leaflets to each scarlet partial involucre: the number varies to 3.

In place of the detailed description of the species, we have subjoined, from Mr. Brown's instructive treatise on the botany of Terra Australis, in the Appendix to Flinders's Voyage, an opinion of the structure of the flower, formed subsequently to that laid down by Linnæus, which still continues the routinary precedent of the systematic catalogues.

"The view I take of the structure of EUPHORBIA is, in "one important particular at least, different from those "given by Lamarck, Ventenat, Richard and De Candolle, "though possibly the same that Jussieu has hinted at; so "briefly, however, and I may add obscurely, that if his "supposition be really analogous to what I shall presently "offer, he has not been so understood by those who profess "to follow him in this respect."

“With all the authors above quoted I regard what Linnaeus has called calyx and corolla in EUPHORBIA, as an involucrum, containing several staminiferous flowers which surround a single pistilliferous flower. By some of these authors the staminiferous flowers are described as monandrous (one-stamened), and in this respect, also, I agree with them; but the body which all of them describe as a jointed filament, I consider to be made up of two very distinct parts, the portion below the joint being the footstalk of the flower, and that above it the proper filament: but as the articulation itself is entirely naked, it follows, that there is no perianthium; the filiform or lacinated scales, which authors have considered as such, being on this supposition analogous to bracteæ; the pistilliferous flower, in conformity with this supposition, has also its pedunculus, on the dilated, and in a few cases obscurely lobed, apex on which the sessile germen is placed. If this be a correct view of the structure of EUPHORBIA, it may be expected that the true filament, or upper joint of what has commonly been called filament, should, as in other plants, be produced subsequent to the distinct formation of the anthera, which consequently will be found at first sessile on the lower joint or peduncle, after that has attained nearly its full length; and accordingly this proves to be the case in such species as I have examined. Additional probability is given to this view by the difference existing between the surfaces of the two joints in some species. I consider it, however, as absolutely proved by an unpublished genus of this order, having an involucrum nearly similar to that of EUPHORBIA, and like it, inclosing several fasciculi of monandrous staminiferous flowers, surrounding a single pistilliferous flower; but which, both at the joint of the supposed filament, and that by which the germen is connected with its pedicellus, has an obvious perianth, regularly divided into lobes.”

The drawing was made at Mr. Creswell's, of the Priory, Battersea.



a f The pedicled germen of Linnaeus: the peduncled pistilliferous flower and sessile germen of Brown. *b* The barren filaments of L.: the bractes of B. *c* The stamens of L.: the monandrous peduncled flowers of B. *e* The calyx of L. *d* The corolla of L.; which two last are considered together as the involucre of the flower by Mr. B.



EUPHORBIA rigida.

Tartarian Spurge.

DODECANDRIA TRIGYNIA.

Nat. ord. EUPHORBIÆ. Jussieu gen. 385. Div. Styli plures definiti, sæpiùs tres.

EUPHORBIA. Suprà vol. 3. fol. 190.

Div. Floribus umbellalis: calycinis segmentis bicornibus s. lunatis.

E. *rigida*, umbella multifidâ bifidâ, foliis lanceolatis mucronato-pungentibus coriaceis multifariâ imbricatis margine lævibus, involucellis reniformi-cordatis, petalis dilatatis crenulatis, capsulis glabris. *Marsch. Bich. fl. taur. cauc.* 1. 375.

Euphorbia pungens. *Herb. Banks. Exemplar à P. Russell M. D. in montibus Syriæ lectum.*

Planta perennis, rigida, glauca. Caules simplices, aggregati, pedales ad sesquipedales, teretes, calamum crassi, albido-virentes, hinc indè aliquo rubore suffusi. Fol. elongato-oblonga, lanceolata acumine producto pungente, crassiuscula, coriacea, avenia, glauca margine lævi, longiora biuncialia, maximum semunciam v. circà lata, patentia, sparsè ambientia, nu merosa, laxiuscula, decrescentia. Umbella sub-8-fida, subsesquiuncialis, terminalis, flavo-virens, hinc indè fusco-flavescens. Involucrum polyphyllum, patentissimum, brevius umbella, foliola cuneato-oblonga, vix duplo latiora quam longà acumine brevi innocuo. Umbellulæ trifidæ, flore medio masculo breve pedicellato, lateralibus hermaphroditis subsessilibus. Involucella diphylla, rhombeo-cordata, tenera mucrone molli, primaria $\frac{2}{3}$ uncie alta, secundaria infra semiunciam. Flores magnitudine ferè Ribium, graveolentes. Cal. turbinatus pallens 5-fidus, segmentis erecto-conniventibus, brevibus, subrotundis, margine crenulato-lanuginosis, æquantibus petala. Pet. 4, glanduloso-incrassata, extra calycem rotato-potentia, transversè oblonga v. obsoletissimè reniformia, integerrima, sub anthesi facie interiore madentia saturatèque flavicantia, bicornia cornubus ex angulis marginis superioris subtus eductis, clavato-teretibus, interdum connatogeminis triplicibusve. Stam. in hermaph. 12; anth. didymæ oculis globosis: poll. flavum. Germ. oblongiusculum, glabrum, rotundatè 3-gonum, stipite æquante calycem: styli 3, fasciculati, virides, sublongiores germine, stigmatibus brevibus bifidis lobulis subrotundis planiusculis saturatè viridibus.

A species observed by M. Marschall von Bieberstein in Southern Tartary, growing in dry spots on the cliffs of the Black Sea. A specimen, found by Dr. Patrick Russell on the mountains of Syria, had however been long ago deposited in the Banksian Herbarium, by the name we have cited; but the species was not published until it appeared in the "Flora Taurico-Caucasica," and has not been even yet inserted in any general enumeration of vegetables. It resembles EUPHORBIA *Myrsinites* in many respects, but differs by upright taller

stems, longer narrower leaves, even at the edge and not cartilaginously serrated as in that, by a straight prickle at the end of these instead of a slantingly hooked one, nor are the general and partial involucre finely serrated at the edge as there; the segments of the calyx also are here more conspicuously uneven at the edge.

The plant has been very recently raised by Mr. Knight, nurseryman in the King's Road, Chelsea, from seed received from Moscow.

Mr. Marschall has denominated "calycine segments" the parts that have been termed "petals" by others, and vice versa.

A stiff glaucous perennial plant. *Stems* aggregated, simple, from a foot to a foot and half high, round, about as thick as a common pen, greenish white, here and there stained with purple. *Leaves* elongatedly oblong, lanceolate, tapered and pointed by a small prickle, thickish, leathery, veinless, glaucous, even at the edge, longer ones about 2 inches long, broadest half an inch wide, spreading, scattered all round, numerous, loosishly set, diminishing in size as they ascend the stem. *Umbel* generally 8-rayed, about an inch and an half long, terminal, greenish yellow, here and there shaded with tawny brown. *General involucre* of many leaflets, widespread, shorter than the umbel, *leaflets* cuneately oblong, with a small soft prickle. *Partial umbels* 3-rayed, middle flower stamenbearing shortly pedicled, side-ones with both stamens and pistil, subsessile. *Partial involucre*s two-leafletted, rhomboidally cordate, tender. *Flowers* about the size of those of the common currant, of an unpleasant smell. *Calyx* turbinate, pale, 5-cleft, segments uprightly convergent, short, roundish, crenulate and downy at the edge, about equal to the petals in depth. *Petals* 4, glandularly thickened, rotately expanded on the outside of the segments of the calyx, transversely oblong or very faintly reniform, deep yellow, entire, wet and clammy at the inner surface, two-horned, horns clavate, issuing from under the corners of their front edge, sometimes doubly, sometimes triply headed. *Stamens* 12 in the primary flowers: *anthers* twin, with globular cells: *pollen* yellow. *Germen* somewhat oblong, smooth, roundedly 3-cornered: *styles* 3, fascicled, green, rather longer than the germen, with short two-cleft *stigmas*, the lobes of which are of a deep green colour, flattish and roundish.



* EUPHŌRBIĂ răgidă.

Double-glanded Euphorbia.

 MONŒCIA MONANDRIA.
Nat. ord. EUPHORBIACEÆ.*EUPHORBIA. Bot. Reg. vol. 3. fol. 190.*

E. rigida; suffruticosa, calibus diffusis, foliis rigidis obovatis acutis imbricatis glaucis margine lævibus, umbellâ multifidâ bracteolis subrotundo-reniformibus cordatis, involucris lacinis rotundo-cuneatis biglandulosis: glandulis capitatis marginalibus quibusdam minoribus interdum interjectis.

*E. rigida. Bieb. Taur. cauc. 1. 375. Tenore Sylloge. 237.**E. biglandulosa. Desf. cor. Tourn. p. 88. t. 66. Gussone fl. sic. 1. 555.?**Tithymalus myrsinites legitimus. Clus. hist. 2. 189. ic.*

A prostrate rigid glaucous-leaved plant, found wild by Bieberstein on dry declivities in the neighbourhood of the Black Sea, flowering in May and June; by Gussone on low mountains and barren calcareous hills in many places in Sicily; and by Tenore in various parts of Calabria and the Abruzzi in similar situations.

It was brought from Italy by the Hon. W. F. Strangways, who has distributed it to many gardens. The specimen now figured was taken from the garden at Abbotsbury in March of the present year, having survived the severe winter. It has also resisted the cold pretty well near London on warm dry rockwork, or at the foot of a south wall well secured from rain. For such situations it is well adapted, and if in health it is a particularly handsome species.

Like most of the hardy perennial Euphorbias, this is easily increased; for when the plant is once well established,

it produces under-ground shoots, which, if separated close to the old plant in the autumn or spring, will soon make strong plants. It may also be increased by taking pieces of the strongest roots in spring, and planting them where they are to remain, leaving a little of one end above the surface of the ground.

I presume this is undoubtedly the *Tithymalus myrsinites* legitimus, well figured by Clusius, and it should also be the *E. biglandulosa* of Gussone, as Tenore asserts; but the former of these two Italian authors describes his plant with rather erect stems (*caules erectiusculi*), which is at variance with the species before us. It however seems quite to agree with *E. rigida* of Bieberstein, to which Tenore refers the Sicilian the *E. biglandulosa*.

In the gardens this has occasionally acquired the erroneous name of *E. myrsinites*, a plant with leaves cartilaginous and serrated at the edge.



* EUPHŌRBĬĂ Venětă.

Venetian Euphorbia.

MONŒCIA MONANDRIA.

Nat. ord. EUPHORBIACEÆ.*EUPHORBIA. Bot. Reg. vol. 3. fol. 190.*

E. veneta; suffruticosa, foliis lineari-lanceolatis acutis basi angustatis integerrimis pubescentibus, ramis florigeris axillaribus terminalibusque 1-3-cephalis, bracteis connatis rotundatis mucronatis pedunculoque tomentosis, glandulis involucri pallidis lunatis inæqualiter dentatis, ovariis lanatis.

*E. veneta. Willd. enum. p. 507.**E. characias* var. *Röper euphorb. germ. 68. Rchb.fl. excurs. no. 4800.*

A fine half-shrubby ever-green plant, inhabiting not only the vicinity of Venice, but the country about Nice and Genoa, Dalmatia, Friuli, and elsewhere in the same part of Europe. It is usually considered a variety of *E. Characias*, but it differs in the glands of the involucre being yellow and toothed, not chocolate brown and entire, and in the inflorescence being much more leafy and compact; and these differences are not altered by cultivation.

The specimens from which the drawing was made, were communicated by the Hon. W. F. Strangways, from his garden at Abbotsbury.

It is a rather hardy trailing perennial plant, growing from one to two feet high, in any strong stiff soil and dry situation, particularly well adapted for rock-work, along with *Sedums* and similar plants, never suffering in the driest parts of summer, but very impatient of much wet in

* So called after Euphorbus, the physician of Juba, king of Mauritania.

winter. It flowers during a great part of summer if in a dry situation, and is of ready culture, for the plants when once established produce numerous under-ground shoots, which rise to the surface during summer, and if separated close to the old plant in the autumn, will make young ones in a short time.



HOYA campanulata.

Bell-flowered Hoya.

PENTANDRIA MONOGYNIA.

Nat. ord. ASCLEPIADACEÆ. (ASCLEPIADS, Vegetable Kingdom, p. 623.)

HOYA, R. Br.—Calyx quinquepartitus. Corolla rotata, quinquefida. Corona staminea pentaphylla, foliolis depressis, carnosis, angulo interiore indentem antheræ incumbentem producto. Antheræ appendice membranacea terminatæ. Pollinia basi affixa, conniventia, compressa. Stigma muticum v. subapiculatum. Folliculi læves. Semina plurima, ad umbilicum comosa. —Suffrutices in Asia et Nova-Hollandia tropica indigeni, volubiles v. decumbentes, sæpe radicales; foliis oppositis, carnosis v. membranaceis, umbellis interpetiolaribus, multifloris.—Endl. gen. 3501.

§ II. Leaves coriaceous, transversely veined, green.—Decaisne.

H. campanulata; volubilis glabra, foliis ovalibus acuminatis breviter petiolatis, pedunculis petiolis longioribus, umbella multiflora, corolla campanulata 5-dentata.

Hoya campanulata, Blume Bijdragen, p. 1064.

Physostelma ? campanulatum, Decaisne in DeCand. prodr. 8. 633.

This very curious plant is a native of Java, where it was found by Dr. Blume, who describes it as an inhabitant of mountain thickets on the west of the island; it is called by the natives *Tjunkankan*, and flowers all the year round. Its introduction is due to Messrs. Veitch, of Exeter, to whom it was sent by Mr. Thomas Lobb, and from whom we received the specimen now represented in April, 1846.

Its habit is altogether that of a thin-leaved Hoya, but its peculiarly formed corolla gives it a different appearance. On this account M. Decaisne removes it to the genus *Physostelma*, but as he does so doubtfully, and as it wants the bladdery coronet which is proper to that genus, giving it its name, it does not seem desirable that the current nomenclature should be disturbed.

It requires the same treatment as *Hoya carnos*.



* HŌYǺ coriācǣǺ.

Thick-leaved Hoya.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADACEÆ.

HOYA. R. Br. Corolla rotata, 5-fida. *Corona staminea* 5-phylla, foliolis depressis patentibus carnosis, angulo interiore producto in dentem antheræ incumbentem. *Antheræ* membranâ terminatæ. *Massæ pollinis* basi affixæ, conniventes, compressæ. *Stigma* muticum, vel subapiculatum. *Folliculi* læves. *Semina* comosa.— Frutices aut suffrutices, volubiles, scandentes, aut decumbentes. Folia opposita, carnosa v. membranacea. Umbellæ laterales, multifloræ. Wight Contributions to the Botany of India, p. 35.

H. coriacea; foliis subvenosis ovalibus acutis v. acuminatis coriaceis glabris, corolla intus sericeâ. *Blume Bijdr.* 1063 ?

Suffrutex. Caulis teres, glaber. Folia glabra, subcoriacea, ovalia, acuta, venosa nec nervata, suprâ atroviridia, infrâ pallida. Umbellæ multifloræ, pedunculatæ, pendulæ, axillares; pedicellis glabris; bracteis minutis, squamæformibus, tomentosis involucatæ. Flores albidî; corollâ rotatâ, reflexâ, intus pubescente, basi tomentosâ, laciniis linearibus acuminatis. Corona staminea glaberrima; foliolis utrinque acuminatis. Antheræ oblongæ, obtusæ, membranâ brevi bidentatâ terminatæ. Pollinia erecta, glandulâ simplici exsulcâ.

A very pretty stove plant, sent by Mr. Cuming to Messrs. Loddiges, from Manilla; it flowered for the first time in August 1838.

The genus *Hoya* is a large one, the species of which abound in the southern parts of India, and are but imperfectly known to Botanists. Dr. Wight mentions twenty as found in Hindostan and the neighbouring islands; to which Dr. Blume adds nine more. The characters of the latter are so very short that it is impossible to ascertain, in the ab-

* Named in compliment to Mr. James Hoy, for many years the Botanical Gardener to the Duke of Northumberland at Syon House.

April, 1839.

H

sence of authentic specimens, whether a plant corresponding with those characters is really the one intended; for distinctions expressed in such brief terms may apply to several different species and not be peculiar to one only. For this reason I am in doubt whether the plant now figured is really the *H. coriacea*, although I perceive no difference between it and Dr. Blume's definition of that species. It is to be hoped that this and all such points will be settled by M. Decaisne, who, fortunately for science, has undertaken the elaboration of the natural order Asclepiadaceæ for DeCandolle's *Prodromus*.

Fig. 1. represents an anther viewed from the inside; and fig. 2. a pair of pollen-masses adhering to their common gland.

This curious species seems to be nearly parasitical in its habits. Messrs. Loddiges grow it in the Orchideous house, on the block of wood upon which it was imported,—this is placed in a pot, and surrounded with soil. It will grow in any light soil, the chief thing in its cultivation being a warm and moist atmosphere.

It does not send out roots from its stem like the other species, and is found at present rather difficult to propagate. However, there is little doubt of its being multiplied with a little patience either by cuttings or layers.

HOYA imperialis.

H. imperialis (Hoyæ veræ); caule volubili, petiolis costâque tomentosis, foliis coriaceis anguste oblongis ciliatis glabris aveniis apiculatis apice recurvis basi rotundatis v. leviter cordatis, pedunculis tomentosis pendulis foliis brevioribus, umbellis multifloris, sepalis ovatis obtusis tomentosis, corollæ maximæ lobis triangularibus stellatim patulis ciliatis intus lævibus fauce tomentosâ, coronæ stamineæ foliolis compressis bilobis lobo interiore acuto subdentato postico ovato obtuso.

This is the most noble climbing plant we have ever seen. Beautiful specimens in flower have for some months been in our possession, sent from Borneo by Mr. Lowe, Junr.; but we have refrained from publishing an account of them, under the supposition that no living plant had reached England. We are now, however, able to state, that the plant is in the possession of Mr. Lowe of Clapton, who has already begun to put it into the trade. Imagine, then, a true Hoya, with woolly stems, leaves six inches long, and clusters of the most magnificent flowers, forming a diadem of ten rays; each flower fully three inches in diameter, and with the delicate texture of the common Hoya carnosâ, and he will have some notion of this superb species. In Mr. Lowe's letter from Sarawak, dated January 12, 1846, we have the following account of its discovery. "On the next day, when in the territory of the Gumbang Dyaks, I found another curious plant, belonging to Asclepiads; it is an epiphytal climber; there was but one individual, growing from the decayed part of a tree, also overhanging the river. The flowers are large and in umbels; the leaves are leathery; and the stem abounds in a white, perhaps acrid, juice. The contrast between the purple of the petals and the ivory white of the parts of fructification renders it highly beautiful."

This species is certainly new, unless it should be the *Asclepias Sussuela* of Roxburgh, a Moluccan plant, said to have flowers nearly three inches in diameter; but that botanist cites, without any doubt, the *Corona Ariadnes* of Rumphius, which has flowers only as large as a shilling (denarius), and therefore cannot be the species now described. Neither can this be the *Hoya speciosa* of Decaisne, which has the flowers velvety inside, and only one inch and three-quarters across; nor the *Hoya grandiflora* of Blume, which has leaves woolly beneath. Those glorious species are still to be imported, one from Java, the other from Amboyna, and either would form an invaluable addition to our gardens.



HOYA pallida.

Pale-flowered Hoya.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ.

HOYA, R. Br.—*Massæ pollinis* læves, 10, erecto-conniventes. *Antheræ* membranâ terminatæ. *Corona* staminea 5-phylla, foliolis depressis, angulo interiore producto in dentem antheræ incumbentem. *Cor.* rotata. *Brown in Hort. Kew.* 2.84.

H. pallida; foliis ovato-lanceolatis acuminatis carnosis venosis, umbellâ hemisphaericâ compactâ.

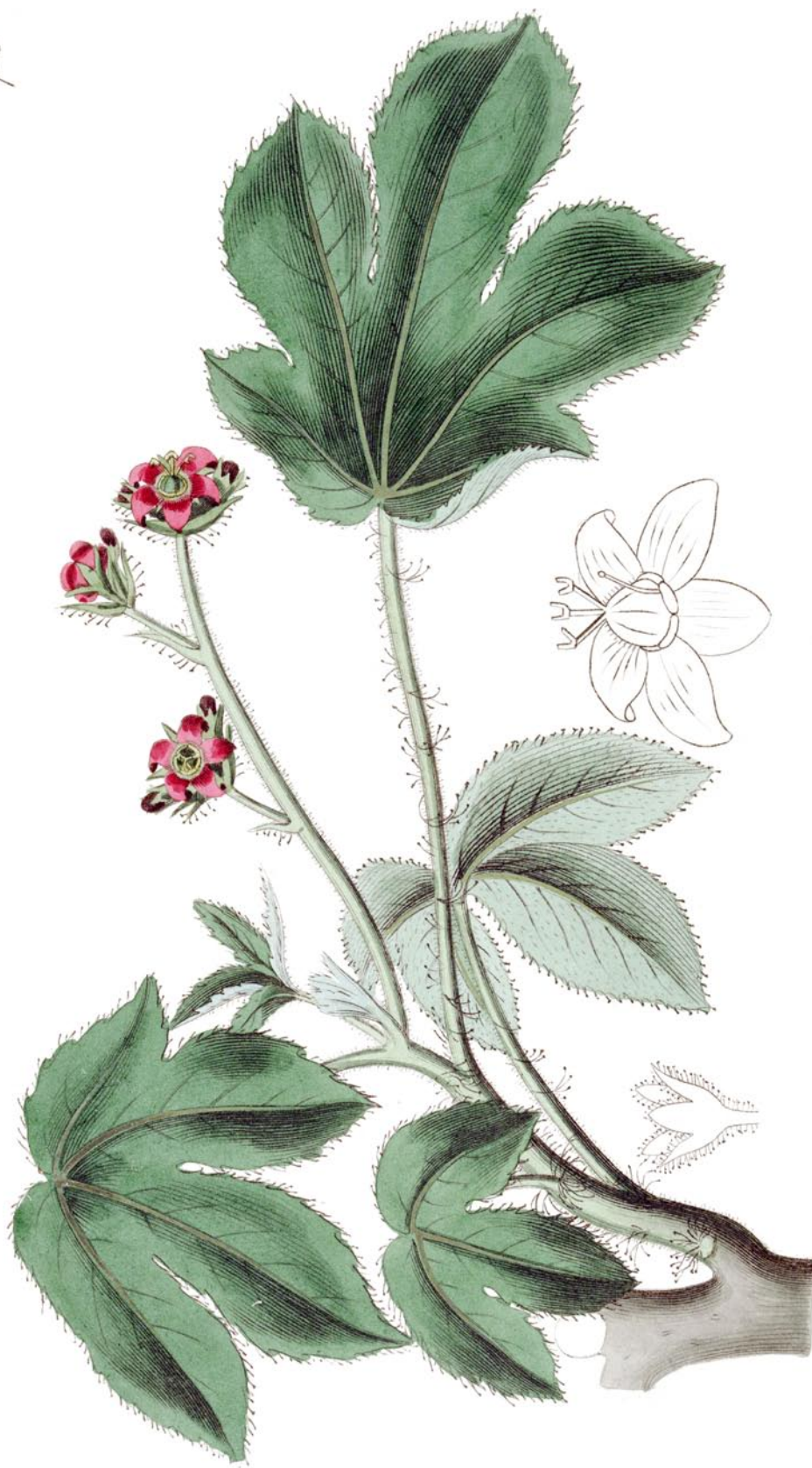
OBS. *Hoya carnosa* differt, præter characteribus supra datis, colore *foliorum* multò intensiore, *floribus* rubicundis odoratoribus, laciniis corollæ acutioribus.

This new species of *Hoya* has been known for a long time to exist in collections, but we believe that the specimen from which our drawing was made, was the first flowering branch that had been produced. It was communicated to us in July 1825, by His Grace the Duke of Northumberland, from his noble garden at Sion House.

From *Hoya carnosa*, and all its seedling varieties, *H. pallida* may be readily distinguished by the pallid hue which pervades every part; an absence of colouring which extends even into the flowers. The latter are less fragrant, and their segments are less acute than those of *H. carnosa*.

A hothouse climber, of the easiest culture.

J. L.



JATROPHA gossypifolia.

Cotton-leaved Physic-nut or wild Cassava.

MONECIA MONADELPHIA.

Nat. ord. EUPHORBIÆ. *Jussieu gen.* 384. *Div.* Styli plures definiti: sæpiùs 3.

EUPHORBIACEÆ. *Brown in Flind. voy.* 2. 555.

JATROPHA. MONOICA. *Corolla* 5-partita aut 5-loba, interdùm in masculis caliculo 5-partito cincta. *MASC. Stam.* 10, filamentis medio coalitis, horum 5 exteriora interdùm breviora, interdùm distincta, interdùm glandulis 5 cincta. *FÆM. Germ.* 1; *styli* 3; *stig.* 3. *Capsula* tricocea, trisperma. *Herbæ aut frutices; folia alterna, stipulacea, sæpè palmata, interdùm in apice petioli glandulosa; flores corymbosi axillares aut terminales, corymbis monoeicis. Radix quarundam tubulosa, esculenta. Congener ex Linn. suppl.* HEVEA. *Aublet t.* 335, *Guianensibus* Caoutchouc, *arbor monoica lactescens seu succo fæta aqueo resinoso, post concrementiam elastico* (gomme élastique) *et tunc ad usus varios usurpato; hujus rami apice filiosi, folia alterna ternata; fructus corticatus tricoccus coccis ligneis 1-2-spermis; semina in crustâ fragili; cætera ab Aubletio non observata.* *Juss.* 1. c. 389.

OBS. Genus difficillimè determinandum; character enin difformis, in diversis speciebus varians. Tamen, nisi læso genere maximè naturali, in plures vix dilacerandum. *Habitus et inflorescentia JATROPHAM à congeneribus (coordinatis) distinguunt: RICINO omninò proxima est, solo ferè numero staminum ab illa caractere diverso.* Swartz obs. 366.

J. gossypifolia, foliis cordatis 5-lobis serratis glandulo-ciliatis, pilis ramosis glandulosis in foliorum axillis et petiolis. *Willd. sp. pl.* 4. 657.

Jatropha gossypifolia. *Linn. sp. pl. ed.* 2. 2.1428. *Swartz obs.* 366. *Hort. Kew. ed.* 2. 5. 329.

Jatropha staphisagrifolia. *Mill. dict. ed.* 8. n. 9.

J. humilior setis ramosis, foliis trilobis 1-5-lobis denticulatis. *Browne jam.* 348.

Ricinus minor, staphisagriæ folio flore 5-petalo purpureo. *Sloane jam.* 1. 129. *t.* 84.

Ricinus americanus perennis, floribus purpureis staphisagriæ folio. *Comm. hort.* 1.17. *t.* 9.

(β) *Jacq. ic. rar.* 3. *t.* 623. *coll.* 1. 154.

Caulis 2-3-pedalis, *Herbaceus, ramosus, glaber.* Rami subdivisi, teretes, ciliis v. setis ramosis glanduliferis basi obsiti. *Fol. digitata, 5-partita; lobis ovatis, acutis, serratis, denticulato-ciliatis. Cilia glandulosa. Pedunc. communis. terminalis, partialibus cymosis, bifidis; floribus masculis copiosioribus; feanneis solitariis in dichotomiâ pedunculorum.* *MAS. Cal* 5-phyllus. *Foliola ovata, acuta, ciliata. Cor. profundè 5-partita, atropurpurea, lac^s. ovatis. Glandulæ 5, nectariferæ, subrotundæ, ad basin staminum. Fil^a. 10-12, à basi ad medium coalita, longitudine corollæ; anth^æ. flavæ, 2-fidæ, ovatæ. FÆM. Cal. et Cor. maris. Nect 0. Germ. subrotundum. Stylus ex basi 3-fidus: stig^a. dilatata, 2-fida. Caps. ovata, 3-gona, retusa, 3-cocca, 3-loc. Sem^a. solitaria.* Swartz loc. cit.

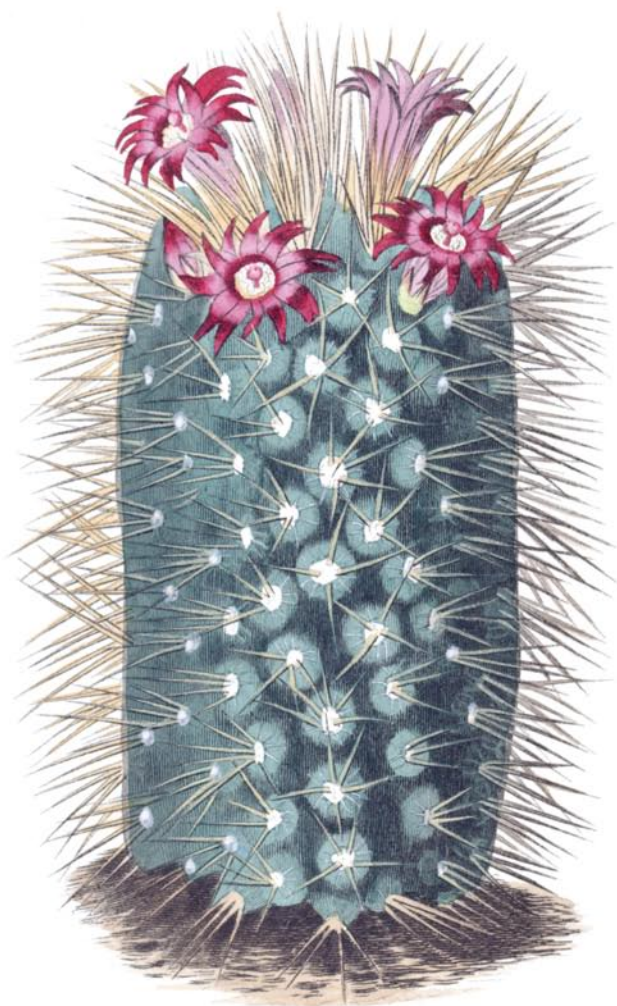
Native of the West Indies; by road-sides and cultivated lands.

Introduced in 1690 by Lord Portland.

A hothouse plant.

Stem 2-3-feet high, herbaceous, branched, smooth. *Branches* subdivided, round, surrounded at their base by small bristles with glandular tips. *Leaves* digitate, 5-parted; lobes ovate, pointed, serrate, toothedly ciliate: *hairs* glandular. *Common peduncle* terminal: *partial* ones cymose, dichotomous. *Male flowers* more abundant: *female* placed singly in the fork of the common peduncles. MALE FLOWERS. *Calyx* 5-leaved. *Leaflets* ovate, pointed, ciliate. *Corolla* deeply 5-parted, dark purple; segments ovate. *Nectariferous glands* roundish, placed at the feet of the stamens. *Filaments* 10-12, united from the base to the middle, the length of the corolla. *Anthers* deep yellow, 2-cleft, ovate. FEMALE FLOWERS. *Calyx* and *corolla* the same as in the male flower. *Nectary* 0. *Germen* nearly round. *Style* 3-cleft from the base. *Stigmas* widened, 2-fid. *Capsule* ovate, 3-cornered, retuse, 3-coccous, 3-celled. *Seeds* solitary.

According to Swartz this genus is of very difficult definition, including widely varying anomalous species; but still so natural that it cannot be conveniently divided. Comes next to RICINUS, differing by little else in technical character, than the number of the stamens.



MAMMILLARIA* pulchra.

Handsome Mammillaria.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ Dec. Tribus Opuntiaceæ; semina parietibus baccæ affixa.

MAMMILLARIA Haworth.—*Cotyledones* nullæ. *Sufrutices* subrotundi v. oblongo-cylindrici, crassi, carnosi, absque axe ligneo; lactescentes (an semper?) aphylli, mammillis spiniferis crebre creberrimè tecti. *Flores* axillares, inter mammillarum bases.—*Haworth synops. succ.* 177.

M. pulchra; oblongo-cylindrica, spinis subsenis supernis majusculis patulis fulvis; subquatuordecenis eodem spinario inferioribus minutis horizontalibus niveis. *Haworth MSS.*

*Plantæ nostræ simplices, perennes, virides, 4-5 unciales, diametro biunciali, apice lanatâ, depressâ, spinis demùm intertextis undique tectæ. Mammillæ numerosa, ovato-pyramidales, majusculæ seu mediocres, in circiter 11-13 ordines concinnè spiraliter contortuplicatæ. Spinarium (in hoc genere insuper mammillarum apices) tomentosum, sub-20-spinigerum. Spinæ subsex apicales, patuli, seu subsemihorizontales, 6-9, lineares, et sæpiùs aliquantillum recurvantes; aliæque (spinulæ) sub-14 setiformes radianter horizontales, vel subrecurva, et cæteris multoties minores. Flores in hoc genere inter majores rosei, paràm infra planta apicem, per mammillarum axillas lanato-setuligeras subambienter progredientes.—Pone *M. fulvispinam* Haw. in *Phil. Mag.* 1. c. cui forsàn nimis affinis (sed vix), certè locarem.—Haw. MSS.*

“This figure represents a remarkable and new species of greenhouse plant, of the most succulent kind, presented, with other Mexican plants, to the Garden of the Horticultural Society at Chiswick, by Sir J. Lubbock, in December 1826. A great many of its affinities are now in our Gardens; and they are so impatient of water in winter, that they succeed best when planted in small pots of light sandy soil, and each plunged into another larger pot, in

* So called from *mamma*, a teat: the whole surface of these plants is covered with projections resembling the teats of an animal.

which only, water should be given once a fortnight in winter, and once or twice a week in summer, as occasion requires. They may be increased by seeds, or by decapitation in summer, in the usual way, taking special care to dry their wounds properly in some shaded place before planting, and lightly watering them to settle the earth at the time.

“*M. pulchra* is a simple, oblong, cylindrical, green plant, with a depressed woolly apex, and almost covered with unequal *spines*, beautifully and intricately arranged in 11-13 symmetrical, very spiral rows. The *mammillæ* are rather large, and ovately pyramidal. The *flowers* are produced, near the summit of the plant, from the woolly axillae of the *mammillæ*, solitarily, but nearly in a row, are rather large in this genus, and of a rosy colour, opening with us in the month of June.

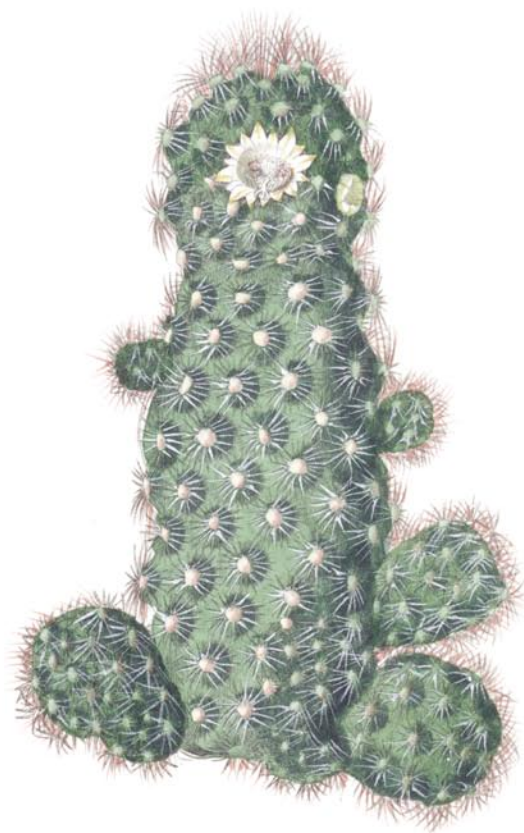
“It may be added, that about six of the superior spines are fulvous, and on the apex of each mammilla, and many times larger, though less expanded, than the basal niveous ones, which are about fourteen in number, and like very small setae, elegantly radiating in a nearly horizontal way, or slightly recurving.

“This plant will arrange next *M. fulvispina*, to which it is doubtless very closely allied, but appears both in character and country distinct.”—*Haw.*

We are greatly indebted to Mr. Haworth for the determination of this species, which belongs to a tribe so numerous and little known, that it would have been scarcely possible for a Botanist less skilful in the knowledge of succulent plants, to have discovered whether it had been previously described or not.

Mr. Haworth employs the term *spinarium* in his specific character, for the corneous place out of which the spines of Cacti proceed, and into which he finds them fitted, as the teeth of animals are into the socket of the jawbone of animals. A very curious structure.

J. L.



MAMMILLÁRIA* tenuis.

Taper Mammillaria.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ. De Cand. § Opuntiaceæ. (Introduction to the natural system, p. 54.)

MAMMILLARIA.—Suprà, vol. 16. fol. 1329.

M. tenuis; pumila, cylindracea, prolifera, axillis nudis, spinis 20 radiatis æqualibus patentissimis intricatis.

M. tenuis. De Cand. in literis.

Caulis cylindraceus, valda proliferus, propaginibus sphericis. Tubercula brevia, ovata, axillis nudis. Spinæ è centro lanato radiatæ, 20-21, juniores purpurascens, adultæ flavæ, omnes æquales, patentissimæ. Flores ochroleuci, minuti.

Gentle reader, hast thou never seen in a display of fireworks a crowd of wheels all in motion at once, and crossing and intersecting each other in every direction? and canst thou fancy those wheels arrested in their motion by some magic power, their rays retained, but their fires extinguished and their brightness gone; just as the glow-worm's light fades before the glare of day, and leaves nothing but a brown and lustreless shell, in place of the fiery mask which he wore in darkness? Then mayest thou conceive the curious beauty of the little herb now before thee; a plant so unlike all others, that we would fain believe it the reanimated spirit of a race that flourished in former ages with those hideous monsters whose bones alone remain to tell the history of their existence, in the quarries of our sandstone, slate, and clay. With nothing living has it any resemblance, except its own immediate kin; and even among those it exceeds in curious intricacy of structure all that we know elsewhere.

* See fol. 1329.

Its native country is unknown to us. The plant from which our drawing was made was received from M. De Candolle. It flowers in May, and propagates readily by means of the little round hedgehog-like bulbs, which it produces in abundance. They should be planted in lime-rubbish, and a little vegetable soil kept just damp, where they will strike root, and speedily establish themselves. Once rooted, nothing but frost or over-watering will destroy them.

J.L.



M. Hart. del.

Det. by J. Ridgway 170 Piscataway Nov. 1. 1821.

J. Watts. sc.

MESEMBRYANTHEMUM blandum.

Fair-flowered Fig-Marygold.

ICOSANDRIA PENTAGYNIA.

Nat. ord. FICOIDEÆ. *Jussieu gen.* 315. *Div. II.* Germen inferum.
MESEMBRYANTHEMUM. *Suprà vol. 3. fol. 260.*

Div. Conspicua. *Ramis fruticosis numerosis adscendentibus, foliis confertis longis triquetris angustis subacutis lævibus glaucis v. viridibus, petalis magnis latis multiseriatis, albis v. rubicundis.* Haworth MSS.

M. blandum, foliis solido-triquetris subtrientalibus glaucescentibus; floribus candidis planis, antè anthesin dilutissimè erubescens. *Haworth MSS.*

Suffrutex pedalis v. ultrà. Rami erectiores atque distantiores quàm in conspicio proximè affini; folia quoque laxiora quàm in eo, et sæpè in ramis floriferis longitudine tantummodò internodiorum: plerumque subglaucescentia. Flores numerosi, speciosi, sæpè ternatim terminales, sudo cælo manè expandentes, denuòque explicatim emorientes. Reliqua ferè ut in conspicio et spectabili. *Haworth MSS.*

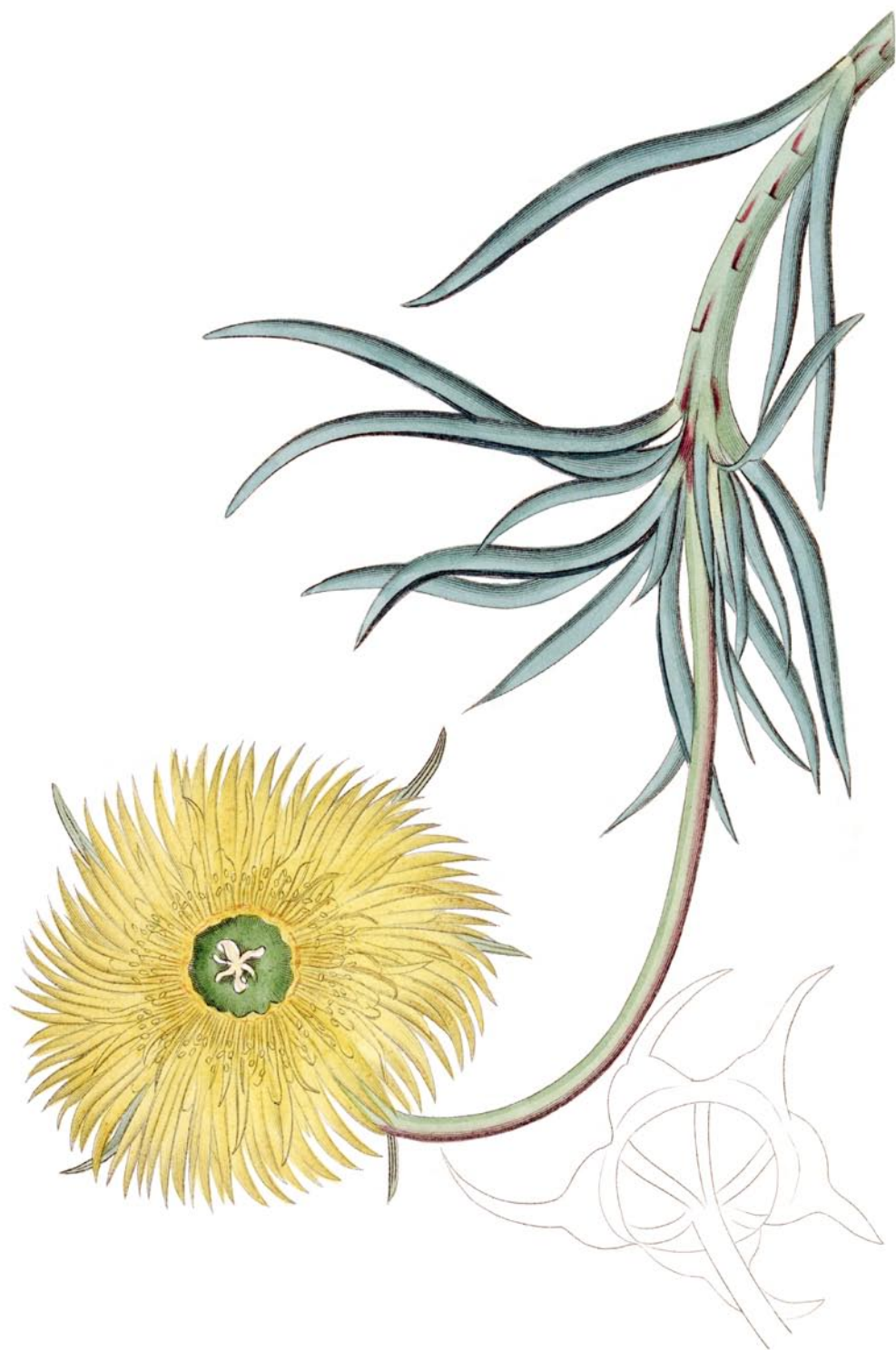
Native of the Cape of Good Hope, where the plant was originally observed by Mr. Burchell, and introduced into this country on returning from his expedition into South Africa.

The drawing was made from a sample which flowered with Mr. Haworth, to whom we are obliged for the above description, and indeed for all we have to say on the subject.

The species belongs to the same section as *spectabile* and *conspicuum*, and in Mr. Haworth's opinion is the more desirable of the three: blossoming abundantly; and if frequently renewed from cuttings at almost all times of the year; a circumstance by which it differs from the other two, which flower principally in the spring.

Mr. Haworth has seen samples in bloom, both in Mr. Burchell's collection at Fulham, and with Dr. Hooker, at

Halesworth, in Suffolk. He has also seen in the nursery of Mr. Ross, of Stoke Newington, a plant which he deems a variety of the species, with narrow inbowed petals; but it did not blossom in perfection. Both varieties are readily propagated by cuttings, but require a greater supply of fresh air and water than the generality of this genus.



MESEMBRYANTHEMUM capitatum.

Short dagger-leaved Fig-Marygold.

ICOSANDRIA PENTAGYNIA.

Nat. ord. FICOIDEÆ. Jussieu gen. 315. Div. II. Germen inferum.
 MESEMBRYANTHEMUM. Suprà vol. 3. fol. 260.

Div. IV. Capitata. Foliis densè alternèque imbricato-capitatis longissimis, absque punctis aut papulis; caudice præ foliorum pondere decumbente, petalis angustissimis deorsum plus minus ciliatis; stylis numerosis, germinibus depressis. Haworth MSS.

M. capitatum, foliis æquilateri-triquetris glaucescentibus, membranis calycinis pallidis, petalis luteis longitudine calycis, exterioribus purpurascens, stylis strictis setaceis. Haworth misc. nat. 41.

Mesembryanthemum capitatum. Hort. Kew. ed. 2. 3. 223. Haw. mesembr. 390. n. 227; et ejusd. synops. pl. succ. 228. n. 58.

Mesembryanthemum pugioniforme. Lin. sp. pl. ed. 2. 1. 699. Mill. dict. ed. 8. n. 46. Willd. sp. pl. 2. 1050. Ejusd. enum. 1. 538.

Ficoides capensis caryophylli folio, flore aureo specioso. Bradl. succ. 2. 5. t. 14.

Astero aizoides del Capo di Buona Speranza. Zanon. ist. bot. 35. t. 13.

Suffrutex stolonibus perennans radice fibrosâ, caudice simplici, seniori pedali v. ultrâ, procumbente. Folia summo caudice congregata, interiora erecta, exteriora patentia sesuncialia, subulata, æquilateri-triquetra, glauciuscula efflorescentiâ papillosâ nullâ, ad angulos plus minus canaliculata. Rami infra omnia provenientes, subverticillati foliosi elongati procumbentes. Pedunculi ramorum continui, subpaniculati, quadriunciales, obsoletè angulosi, asperiusculi. Folia ramea breviora, sæpè remota, terna vel sparsa, bracteacea. Cal. amplus, 5-angularis, 5-fidus, segmentis subæqualibus, è basi rotundiusculâ caudato-attenuatis, interioribus ut sapius membranâ latè instructis. Cor. ampla diametro triunciali: petala ordine multiplici numerosa, infra medium subciliata; exteriora linearia acuta purpurascens, media lineari-lanceolata lucido-lutea, intima capillaria conniventia. Filamenta numerosa, à stylis distantia; anthæ luteæ, polline luteo. Germ. hemisphæricum, depressius quam in speciebus affinibus; styli 16, à filamentis distantes, breves, erecti, setacei, lutescentes. Haw. misc. 41; (phraseologiâ plurimis mutatâ.)

Cultivated here in 1717. Came originally from the Cape of Good Hope. Lasts sometimes from eight to nine years in a warm greenhouse.

The prior name of *pugioniforme* has been transferred by Mr. Haworth from this to the plant constituting the 72d article of the “Plantes Grasses;” differing from *capitatum* in being scarcely more than biennial, in being larger, and in

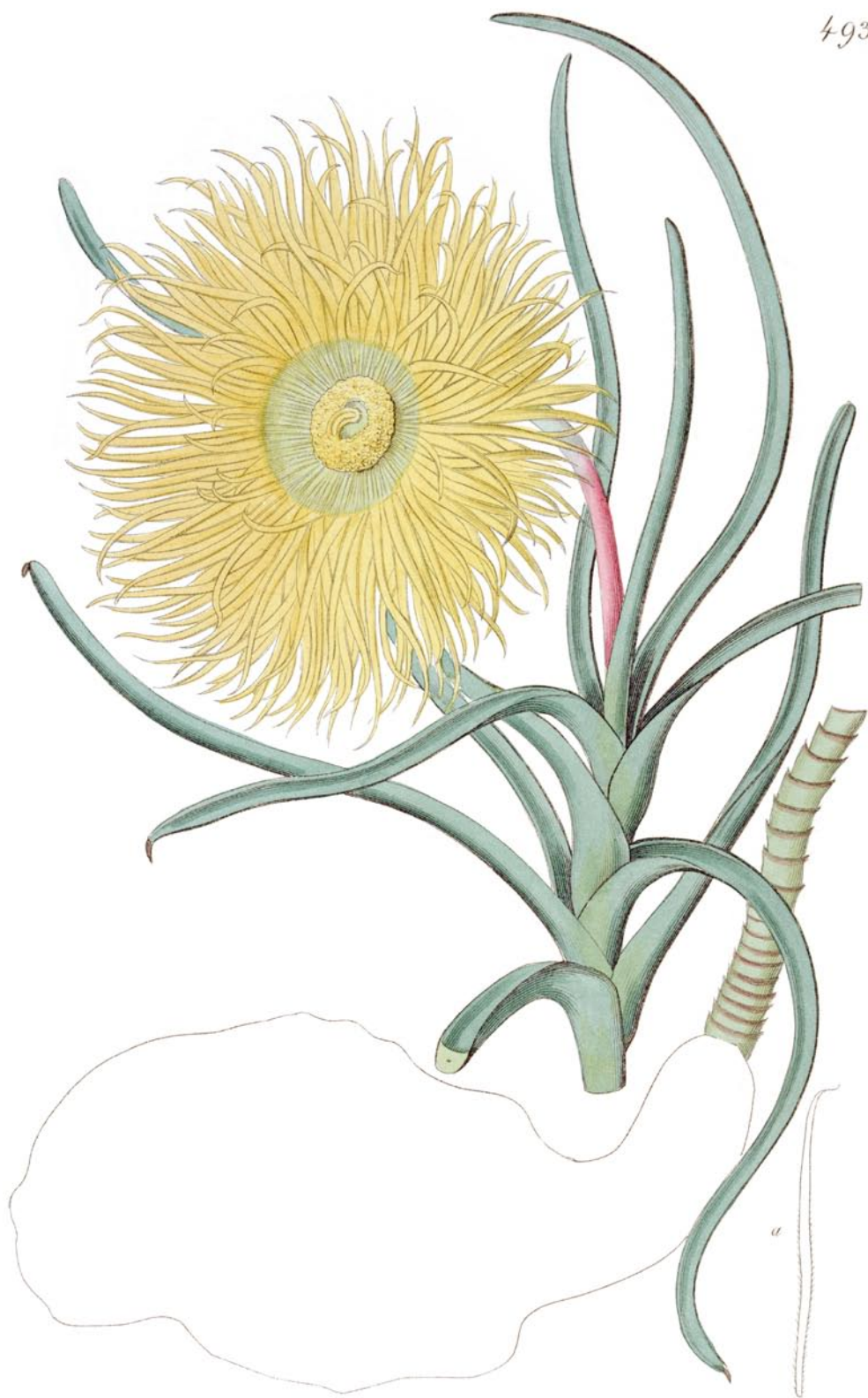
having a longer and more glaucous foliage, although the flowers are not larger than here.

We submit our opinion entirely to Mr. Haworth in regard to the above synonymy, or else we should not have hesitated to adopt the figure in the "Hortus Elthamensis" (*tab.* 210), usually adduced to this plant.

The drawing was taken two years ago at the nursery of Messrs. Whitley and Co. King's Road, Fulham.

Elongatum, *capitatum*, and *pugioniforme* are extremely near akin, and with two others already known, constitute so distinct a group in Mr. Haworth's view, that they are probably destined to be embodied under a new generic name in some future production of the pen of that indefatigable observer of succulent plants. As the species do not in this section always produce suckers or shoots, the mode by which these plants survive, our chief reliance for their continuation is upon seed; which they produce freely, when placed out of doors from May to September.

Stem about a foot or rather more in length, procumbent owing to the weight of the foliage. *Leaves* collected at the summit of the stem, longest about six inches in length, subulate, equilaterally triangular, inclining to glaucous, without any papillary efflorescence; *branches* procumbent. *Peduncles* on the branches, forming a kind of panicle, about four inches long, slightly roughened. *Flowers* yellow, expanding in the forenoon. *Calyx* large; segments nearly equal, caudately tapered. *Corolla* 3 inches over; *petals* numerous in many rows, very narrow, ciliated below the middle. *Filaments* numerous, innermost (abortive stamens) capillary, connivent, standing wide of the styles. *Germen* hemispherical, more depressed than in the other immediately allied species. *Styles* 16, insulated from the stamens, short, setaceous, upright, yellow.



M. Hunt, del.

Pub by J. Ridgway 178 Piccadilly Nov 1. 1820.

J. Watts, 80.

MESEMBRYANTHEMUM elongatum. β .*Dwarf tuberous Fig-Marygold.*

ICOSANDRIA PENTAIGYLLI.

Nat. ord. Ficoideæ. Jussieu gen. 315. Div. II. Germen inferum.
MESEMBRYANTHEMUM. Suprà vol. 3. fol. 260.

Div. IV. Capitata. Foliis densè alternèque imbricato-capitatis longissimis, impunctatis; caudice præ foliorum pondere decumbente, petalis angustissimis deorsum plus minus ciliatis; stylis numerosis, germinibus depressis. Haworth MSS.

M. elongatum, foliis subspithamæis obtusè triquetris semiteretibusve, canaliculatis, glauciusculis, radice tuberosâ, carnosâ. Haworth MSS.

Mesembryanthemum elongatum. Haworth mesembr. 236. Ejusd. misc. nat. 40. et synopsis. pl. succ. 228. Hort. Kew. ed. 2. 3. 223.

(α) *corolla 5-unciali, odore hircino, petalis subcapillaceis pube longa flexuosa ciliatis. Haw. MSS.*

(β) *corolla 4-unciali, odore subhircino, petalis exterioribus deorsum pilis rectis brevibus paucissimis nudo oculo vix manifestis ciliatis. Haw. MSS.*

Radix deformis, crassa, sublobata, magnitudine ferè ovi anatini: (è sicco à var. α . in tabulâ delineata). Caudex simplicissimus, debilis, flexuosus, erecto-procumbens, simul cum pedunculo terminali dodrantalis v. ultrâ, viridi-lutescens, deorsum foliorum vestigiis subarticulato-circinatus. Folia terminalia, ante florescentiam in fasciculum laxiùs congregata, dodrantalia, sæpiùs semiteretia, suprâ plus minus canaliculato-concava, superiora sensim minora semipedalia aliquantùmque distantiora: omnia erecto-patentia, deflexo-emarcescentia, neque decidua. Pedunculus terminalis, teres æquabilis, debilis, 4-uncialis, purpurascens, basi bracteis 3 foliiformibus verticillato-stipatus. Cal. subhemisphæricus segmentis 5 subæqualibus, semiteretibus, subuncialibus, deorsum latescentibus, 2 simplicibus, 2 basi membranâ diaphanâ utrinque auctis, quinto altero tantum latere membranoso. Pet. lutea, nitidissima, numerosissima, multiseriata, calycem longè superantia, sudo cælo post meridiem expandentia, lineari-acuminata, interiora gradatim decrescentia subconniventia, intima formâ ferè filamentorum è quibus pauca antherâ incompletâ terminata. Stamina vera numerosissima, incurvo-conniventia, filamentis tenuissimis, antheris exiguis, polline stramineo-pallido. Styli duodenis plures, saturate flavescentes tortuoso-congesti. Germen suprâ planum, pellucido-virescens, radiato-striatum (radii loculos capsulæ future denotantes). Haworth MSS. (phraseologia aliquantulum mutata).

We have to thank Mr. Haworth for the above description of this rare plant, which he considers a variety of *elongatum*, a species seldom known to blossom with us. The sample was communicated to him from Kew Gardens, where it had been raised in 1819, from seed from the Cape of Good Hope. It flowered this summer, and bids

fair to perfect the fruit, but the parent plant, having produced no lateral shoots or suckers (the means by which the species of this section of the genus survive from year to year), will most probably perish.

We are glad to find that Mr. Haworth perseveres with zeal in the study of this race of vegetables, and to hear that he has collected as many as 200 species of the present genus, besides obtaining competent information of nearly 100 more.

Root tuberous, nearly the size of a duck's egg. That shown in our drawing belonged to a dried sample of variety (α .) *Stem* quite simple, weak, flexuose, procumbent, about 9 inches long or more with the terminal peduncle, greenish yellow, ringed by the scars of the fallen foliage, and looking as if jointed. *Leaves* loosishly congregated at the end of the stem, about 9 inches long, mostly semicylindrical, more or less concavely channelled, upper ones gradually smaller (about 6 inches long) and rather farther apart; all uprightly spreading, reflexed as they wither away, but do not fall off at the base. *Peduncle* terminal, round, of one thickness throughout, weak, 4 inches long, tinged with purple, furnished at the base with 3 verticillately disposed *bractes*. *Calyx* hemispherical, segments 5, nearly equal, semicylindrical, about an inch long, widening downwards, 2 simple, 2 membranously winged on both sides, the fifth only on one side. *Flowers* yellow, expanding after mid-day, but only when the sun shines: *petals* bright, very numerous, in many rows, reaching far beyond the calyx, linearly taper-pointed; *inner ones* becoming gradually less; *innermost* (abortive stamens) with the form of the filaments, now and then bearing an imperfect anther. *Perfect stamens* very numerous, incurvedly connivent; *filaments* very slender; *anthers* very small; *pollen* pale straw-coloured. *Styles* more than 12, deep yellow, twistedly crowded. *Germen* flat-topped, of a pellucid green, radiately streakletted (the streaks denoting the number and place of the cells of the future capsule).



—Hawth. del.

Pub. by J. Ridgway & Sons. 170 Piccadilly. April 1 1819

Smith Scul

MESEMBRYANTHEMUM maximum.

Moon-leaved Fig-marygold.

ICOSANDRIA PENTIJGYXIA.

Nat. ord. FICOIDEÆ. *Jussieu gen.* 315. *Div. II.* Germen inferum.
MESEMBRYANTHEMUM. *Suprà vol. 3. fol.* 260.

Div. VII. Rubicunda, ramis sufrutescentibus glabris, foliis (divi.ione primâ exceptâ) compresso-triquetris nudis: apicibus rectis, petalis (M. edule, M. heteropetalo, et M. dilatato exceptis) rubicandis.

M. maximum, foliis acinaciformi-lunatis pellucido-punctatis subconnatis, caule recto. *Willd. enum.* 1. 539.

Mesembryanthemum maximum. *Haworth mesemb.* 402. n. 132. *EjUSD. misc. nat.* 66. n. 121. *EjUSD. succ.* 292. n. 183. *Hort. Kew. ed.* 2. 3. 233.

Radix lignosa. Caulis lignosus, robustus, strictus, arborem quasi in compendio mentiens, subregularitèr ramosus, è majoribus generis. Rami patentes, numerosi, subpyramidatè dispositi, robusti, firmi, juniores ancipites glaucovirentes confertè foliosi, seniores teretiores, lignosi. Fol. lunulata, v. compressissimè triquetra, incurvescentia carinâ acutâ ventricosâ subcartilagineo-marginatâ obtusiusculâ, opposita, subamplexicaulia potiùs quàm connata, versus basin plurimùm crassiora præsertim a parte interiori, majora subbiuncialia, latitudine superiore ferè $\frac{1}{3}$ partis uncia, laterali subunciali, superne versus sensim in aciem extenuata, glabra, puncticulis minutis semipellucidis irregulariter conspersa, pulvisculo albo canescentia. (Ex anglico D. Haworth vers.) Flores (fortè imperfecti, ob frigorem anni tempestatis) semel tantùm vidi, terminales ternati (quinati) parvi. Pedunculi angulati bracteis 2 magnis foliiformibus instructi. Cal. 5-fidus laciniis inæqualibus, 2 exterioribus (ut sæpiùs in cæteris) majoribus. Cor. rubicunda, petalis linearibus, numerosis. Germ. 5-angulatum. Haworth in misc. nat. ad. loc. cit.

We are obliged to Mr. William Ross, of the Eden Nursery at Stoke Newington, for the sample of the, till now unfigured, species which has afforded the drawing. It was introduced from the Cape of Good Hope by Mr. Masson in 1787; and is one of those that are peculiarly shy in producing bloom with us, though marked in the Hortus Kewensis as blossoming from March to December. The specific title was adopted by Mr. Haworth in allusion to the general size of the plant, not of the flower, which is rather small in proportion.

It belongs to the division that expand their flowers in the forenoon. The following description is taken chiefly from Mr. Haworth's work on this genus.

The largest species hitherto (1794) known. *Root* woody, strong, emitting numerous ramifying fibres. *Stem* strong, firm, upright, woody, pretty regularly branched, more like a little tree. *Branches* spreading, numerous, disposed somewhat in a pyramidal manner, stout, while young ancipitous, glaucous and thickly covered with leaves; when old, more cylindrical and woody. *Leaves* lunulate or very compressedly triangular, incurved with a sharp-edged protuberance, very entire keel, and a slight cartilaginous border, which does not terminate in a point like those of many of the species of this genus, opposite, rather stemclaspings than connate, much the thickest towards the base, especially on the inside, the largest about two inches long, almost one inch deep, and about the third of an inch across the broadest part of the upper side, whence it gradually tapers to a very fine edge, smooth, irregularly sprinkled with minute semipellucid dots, covered with a white bloom or hoar, like that we see on a fresh-gathered plum. *Flowers* (in the specimen Mr. H. saw, and which he thinks might be imperfect from the cold season they were produced in) terminal, by threes (or rather fives), small. *Peduncles* angular, furnished with two large leaflike *bractes*. *Calyx* 5-cleft, with unequal segments, two of which, as in most other species, are larger than the rest. *Corolla* purple; *petals* linear, numerous. *Germen* five-cornered.



R. Earl, del.

Pub by J. Ridgway 170 Piccadilly Feb. 1, 1825.

J. Miller, sc.

MESEMBRYANTHEMUM obliquum.

Bright Afternoon Mesembryanthemum.

ICOSANDRIA PENTAGYNIA.

Nat. ord. FICOIDEÆ.

MESEMBRYANTHEMUM. V. *suprà* fol. 260.

Div. *Aspericaulia*. Suffrutices vix sesquipedales ramosi, ramulis filiformibus scabris; foliis distinctis, remotis, papuloso-micantibus; floribus antimeridianis aurantiis rubicundisve. Hæ plantæ ob micantia folia, coruscantem cohortem efficiunt. *Haw. rev. succ. p.* 182.

M. *obliquum*; foliis distantibus cylindraceis obtusis parvis papuloso-nitentibus, uno singulo pari deflexo, altero ascendente, ramis filiformibus duris asperiusculis suberectis. *Haworth, l. c.*

Fruticulus *spithamæus*, erectus, ramosus: ramulis sæpius alternis, ascendentibus erectisve, subfiliformibus, duris, semper asperiusculis, papulis punctiformibus squamulisve persistentibus demumque ad lentem, vel sub oculo optimo pallidis. Folia distantia, vix semuncialia, obtusa, teretia, at *suprà* aliquantillum depressa, papulosa-nitentia viridia. Flores terminales, solitarii, latè rubicundi, vix unciales. Pedunculi subunciales, filiformes, superne parum clavellati. Calyx laciniis 5, subæqualibus, revoluto-recurvis, obtusissimis, membranatis, demembranatisque, ut in plurimis. Petala paucula, subbiseriata, acuta, integra, sole ardente revoluto-recurva; intima angustiora, erecta, apicibus expansis, basi pallida, uti filamenta. Stamina erecta, collecta, paucave deflorata solùm patentia. Antheræ pallide, petalis humiliores. Styli quinque, filamentorum longitudine, superne patentes expansive, rubicundi. *Haworth MSS.*

This pretty little plant is, we believe, recorded only in Mr. Haworth's excellent Synopsis of the genus Mesembryanthemum, published in his Revisions of Succulent Plants, in 1821. To that gentleman we are indebted for the materials of the present article, which were communicated for the use of this work some years ago, but were then unfortunately mislaid.

This species was raised in his Majesty's Garden at Kew, from Cape seeds, and thence communicated to Mr. Haworth by W. T. Aiton, Esq. By the former gentleman we are informed that it thrives well, during summer, out

of doors, in a very sunny exposure, and bears watering as freely as a common *Geranium*. It may be propagated by cuttings, taken from the tips only of its youngest, not flowering, shoots.

A little shrub, about a span high, erect, branched; the branchlets usually ascending or erect, filiform, hard, always roughish, with little dot-shaped persistent points or scales, which become, viewed through a magnifying glass, or by a strong eye, pale. *Leaves* distant, nearly half an inch long, obtuse, rounded, a very little flattened above, shining, with little points, green. *Flowers* terminal, solitary, bright red, nearly an inch in diameter. *Peduncles* about an inch long, filiform, a little thickened upwards. *Calyx* with five nearly equal segments, which are revolute, very obtuse, with or without a membrane, as in many others. *Petals* a few, in two rows, acute, entire, under the afternoon sun revolute, recurved; the inner narrower, erect, with their ends expanded, pale at the base, like the filaments rose-coloured. *Stamens* erect, clustered, or a few only, which have shed their pollen, curved outwards. *Anthers* pale, lower than , the petals. *Styles* 5, the length of the filaments, at the end spreading or expanded, bright red.

J. L.



* MESEMBRYANTHEMUM rubrocinctum.

Red-edged Fig Marigold.

ICOSANDRIA POLYOYNIA.

Nat. ord. FICOIDEÆ. (Introduction to the Natural System of Botany, p. 160.) J:

MESEMBRYANTHEMUM. Supra, vol. 3, fol. 260.

§ 30. CONFERTA.

Caules fruticosi, ramis confertis ascendentibus. Folia opposita, subconnata conferta triquetra acuta, angulis lævibus. Flores pedunculati solitarii aut ternati speciosi sole expansi rubicundi aut pillidè rosei. *De C. prodr.* v. 3. 436.

M. rubrocinctum; caulibus humlibus ascendentibus ramosissimis, floriferis unifloris, foliis læte viridibus rubrocinctis acinaciformibus lævibus, bracteis connatis, floribus maximis.

M. rubrocinctum. Haworth.

A species which may perhaps be considered the finest of this very extensive genus. It is nearly related to *M. spectabile*, from which it differs in its larger flowers and leaves, and in 16 connate bracts.

It is native of the Cape of Good Hope, and is said to have been ascribed by the late Mr. Haworth in some of his papers, but We have not been so fortunate as to light upon the place.

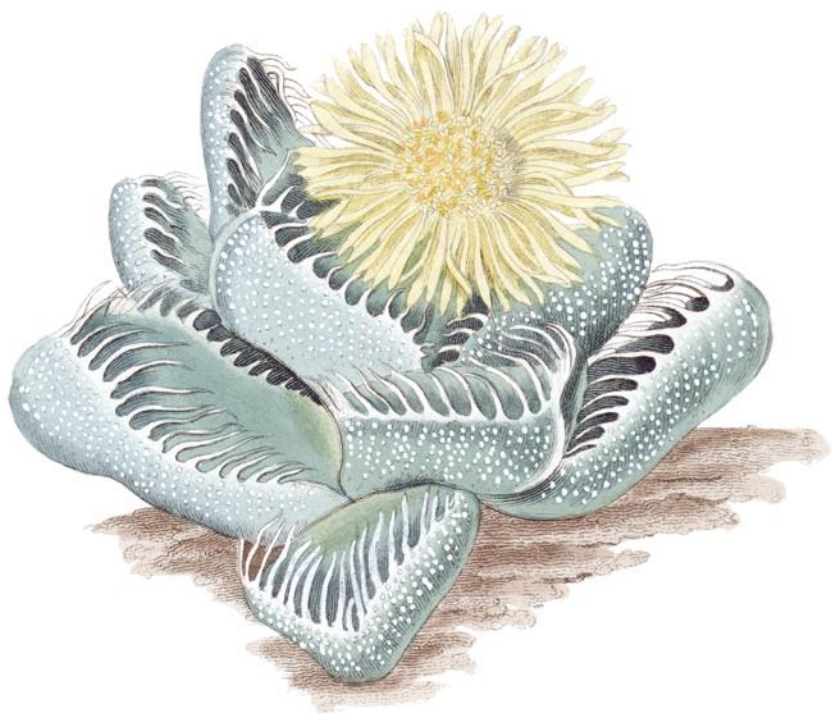
For our specimen we are indebted to the Hon. W. F. Strangways, in whose garden in Dorsetshire it blows in the greatest profusion upon old wall.

Independently of its extraordinary beauty, this has the great merit of being able to resist as much cold as a *Pel-*

* From μεσημβρια noontide, and ανθω to flower; in allusion to the time of the day at which its blossoms usually expand.

argonium, and consequently of being capable of enduring a very mild winter in this climate. Even in our most severe seasons, it is only necessary to protect it with a few layers of matting from the wet, and no fear need be entertained of preserving it.

Our drawing was made in May last.



J. A. Edwards del.

White sc. & Brownlow sc.

Published by B. B. May & Son, Phila. 1861.

MESEMBRYANTHEMUM tigrinum.

Tiger-chap Fig-Marygold.

ICOSANDRIA PENTAGYNIA.

Nat. ord. FICOIDEÆ. *Jussieu gen.* 315. *Div. II.* Germen inferum.

MESEMBRYANTHEMUM. *Cal.* superus 5-fidus persistens. *Pet.* numerosa serie multiplici, linearia basi leviter connata. *Styli* 5, rariùs 4 aut 10. *Caps.* carnosa umbilicata umbilico radiis notato, multilocularis loculis numero styliorum. *Suffrutices aut herbæ; folia opposita aut rariùs alterna, incrassata, formâ plurimùm varia; flores solitarii, axillares aut extrâ axillares aut sæpiùs terminales; fructus interdùm ficiformis.* *Juss. l. c.* 317.

Div. II. Subacaulia, caulibus nullis vel brevissimis, radice perenni. *Hort. Kew. ed. 2. 3.* 213.

M. tigrinum acaule, foliis glaucescentibus albo-maculatis rariùs tuberculatis: marginibus profunde ciliatis. *Haworth misc. nat.* 31.

Mesembryanthemum tigrinum. *Haworth mesemb.* 164. *EjUSD. succ.* 216. *Willd. sp. pl.* 2. 1029. *Thompson's bot. displ.* 9. *Hort. Kew. ed. 2. 3.* 218.

Plantula acaulis, pinguissima, perennis. Folia radicalia, suboctona?, decussato-congesta, patentia, cymbiformi-ovata, glauca, pruinosa, maculis parvis albis irregularibus picta, subuncialia, latitudine $\frac{1}{3}$ unciae, crassitudine ferè $\frac{1}{3}$ unciae, subtùs convexa, supernè versus proræ cymbuli ad instar attenuata, suprâ plana, summis lateribus externè sub dentibus à sulcis vel canaliculis obsoletioribus transversè rugata, interno margine dentato-ciliata dentibus albis cartilagineis setaceo-aristatis, aristis tenuitate ferè filli serici ad lentem villosis, uno versû introrsum inclinantibus. Flos centralis, sessilis, magnus, luteus, croceo-emarcescens, non nisi post meridiem expandens.

Of the 211 species of this genus enumerated by Mr. Haworth, all are indigenous of the Cape of Good Hope, except about five or six. Only one species has a station in Europe, and that at an extreme part, viz. the shores of Naples. Two or three belong to the Levant, one of which is the well-known Ice-Plant, found near Athens. Not a single American species has been observed. The name of Fig-Marygold, by which these plants are known in our gardens, has been suggested by a twofold resemblance, on one hand by that of the fruit to the form of a fig, and on the other by that of the flower to the common Marygold, like which it shuts itself up in cloudy weather. The genus forms the principal group in the gardener's tribe of succulent plants.

The present diminutive species was introduced in 1790

from the Cape of Good Hope, and is one of those whose flowers do not expand till after midday.

A perennial stemless plant. *Leaves* fleshy and very thick, radical, about 8, closely decussated, spreading, ovate, cymbiform or shaped like a boat, glaucous, elegantly marked with small white irregular spots, in our specimen about an inch long, two thirds of one broad and about one third of one thick, convex underneath, narrowing towards the 'end like the head of a boat, flat above, high up the sides faintly and transversely grooved below the base of the teeth, beset at the inside of the edge with a single row of white cartilaginous long-awned slender teeth, inclining towards the base of the leaf; the awns, nearly as fine as the thread of a silkworm, are villous when viewed through a magnifying glass. *Flower* central, sessile, large in proportion to the plant, yellow, becoming saffron-coloured as it goes off.

All these plants belong to the dry stove; and their treatment is too familiar to every one to require notice in this place.

The drawing was made in September, at the nursery of Messrs. Whitley and Co. Fulham.

* OPTÚNTIA monacántha.

One-spined Opuntia.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ. (Introduction to the Natural System of Botany, p. 54.)

OPUNTIA. Tourn. Sepala numerosa, ovarie adnata, foliiformia, summa plana, brevia, intima petaliformia, obovata, rosacea, expansa, tubo supra ovarium nullo. Stamina plurima, petalis breviora. Stylus cylindricus, basi constrictus. Stigmata plurima, erecta, crassa. Bacca ovata, spice umbilicata, tuberculosa, sæpè spinifera. Embryo subspiralis, teretiusculus. Cotyledones semiteretes, germinantes foliaces plansi crassæ. Plumula parva.—Frutices, trunco demum tereti, juniore ramisq. rarissimis cylindricis, sæpiùs plus minus compressis, articulatis, articulis ovatis v. oblongis fasciculos aculeorum aut setarum ordine quincunciali seu spirali dispositos gerentibus. Folia sediformia, caducissima, sub quoque fasciculo juniore. Flores e fasciculis aut marginibus articulorum orti, flavi, aut rubentes. Stamina tactu subirritabilia. De Cand. prodr. 3. 471.

O. monacantha; articulis obovato-oblongis, aculeis solitariis subulatis validis. De Cand. 1. c. Cactus monacanthus. Willd. enum. suppl.

We were favoured with a fine plant of this Cactus by the Countess of Guildford in May last. It is said to be a native of the hotter parts of South America.

With regard to the species, or supposed species of this difficult genus, we cannot do better than quote the words of Professor De Candolle, who has long, carefully and skillfully cultivated them.

“With regard to Nopals with yellow flowers, although they are the most common in the gardens, the study of

* Said to be named from the country of the ancient *Opuntians*, where it grew wild. These people were located upon the site of the present Tolandi, in the Morea, where one species is still found.

their species is perhaps more complicated than that of any other section. It appears pretty well made out that M. Lamarck and myself have united as varieties under the name of *Cactus opuntia*, some species which are truly distinct; but I also think that since that time Botanists have gone too far in describing as species a heap of varieties probably originated in cultivation, and the flowers of which are still unknown. The descriptions of Opuntias made from wild plants correspond so ill with those made in gardens, that it is almost impossible to identify them, considering the negligent manner in which travellers have described them. Thierry de Menonville, who to be sure was an indifferent botanist, but who gave his entire attention to the study of Nopals, says expressly, 'that if Linnaeus justly complained that the species of Cacti with angular stems were inexactly described, we may be sure that the description of Opuntias is still more incomplete, both with regard to number and form. There exist in Mexico thirty species, very different from all that have been described; and I have had neither the time nor the liberty to describe them.'

"The principal characters hitherto employed are the form of the joints and the spines. The first of these characters is to be depended upon only when the mean of all the joints of an individual is taken into account, for there are few Nopals of any size, the same individual of which will not furnish joints of different forms. As to the spines, their number is often variable on the same individual, and all travellers say the same species may have them or be without them; their length is not more constant, and varies within such extensive limits, according to the mode of culture, that we can scarcely give it any importance. The garden Nopals, in general, have them less numerous and smaller than the wild plants. The colour of the spines seems somewhat less variable, but as yet we have upon this subject nothing but garden observations, made upon individuals propagated by cuttings of each other, and we do not know whether these characters come thus from seeds. I therefore consider the principal part of the Nopals with yellow flowers as of doubtful species."



PACHYPÓDIUM* tuberósum.

Tuberous Pachypodium.

PENTANDRIA DIGYNIA.

Nat. ord. APOCYNÆ.

PACHYPODIUM.—*Corolla* hypocrateriformis, fauce tuboque esquamatis; laciniis limbi 5-partiti æquilateris. *Stamina* inclusa, medio tubo inserta; *antheræ* sagittatæ, subsessiles. *Ovaria* duo; *styli* 2. *Squamæ* hypogynæ nullæ. *Folliculi* ovati.—Frutices *carnosi*, spinis: *infrapetiolaribus bilobis trilobisve*. *Folia* sparsa. *Flores axillares v. terminales*.

P. tuberosum; caule basi tuberosâ, spinis rectis subulatis, foliis oblongis subtus tomentosis.

? *Echites succulenta*. ‘*Thunberg. prodr. p. 37. ib. nov. act. Petrop. v. 14. p. 505. t. 9. f. 2. Willd. sp. pl. 1. 1241. Römer et Schultes, 4. 392. Spreng. syst. 1-631.*

Caulis basi sphaericus, tuberosus, lævis, ramis teretibus, succulentis, divisis, spinosis: spinis infra folia provenientibus, bi-trilobis, subulatis, planis. Folia sparsa, sessilia, oblonga, obtusa, carnosa, subtus tomentosa. Calyx inferus, 5-phyllus, foliolis ovatis, acutis, pilosis, imbricatis. Corolla hypocrateriformis, extus pilosa, tubo medio ventricoso, intus infra antheras piloso; limbo contorto: laciniis æquilateris, oblongis, obtusis, subunguiculatis: fauce nudâ. Stamina medio tubo inserta; antheræ sessiles, sagittatæ, longitudinaliter dehiscentes. Ovarium didymum, polyspermum. Styli duo. Squamæ hypogynæ nullæ.

When Mr. Brown remodelled the order of Apocynæ in 1809, he pointed out the *Echites succulenta* and *bispinosa*, two remarkable Cape plants, which he had had no opportunity of examining, as likely to constitute a distinct genus. In this opinion, the plant now figured shews that he was right. It evidently differs from *Echites*, in the segments of the corolla being equal-sided, and in the want of hypog-

* From *παχὺς*, thick, and *ποὺς ποδὸς* a foot; in allusion to its succulent stem and swollen root.

nous scales; and is more nearly allied to *Holarrhena*, which differs in having its stamens arising from the bottom of the corolla instead of the middle, regularly opposite leaves, and whole habit.

This plant offers an exception to the usual position of the leaves in *Apocynæ*; they are not opposite, as in the order generally, but scattered irregularly over the surface of the stem; a circumstance which appears to be owing to the unusually succulent and distended state of the stem.

A native of barren, sandy plains, at the Cape of Good Hope. If it is the *Echites succulenta*, it was found by Mr. Burchell in the Kloof and its mountains; but upon this point there is some doubt. It agrees with neither the figure nor description of Thunberg, in minor details; but it has so much general resemblance, that it is very probable they are the same,—allowance being made for Thunberg's loose mode of description.

Our drawing was made at Mr. Tate's Nursery, in August 1828.

Stem spherical at the base, tuberous, smooth; branches taper, succulent, divided, spiny. *Spines* proceeding from below the leaves, 2- or 3-lobed, subulate, flat. *Leaves* scattered, sessile, oblong, obtuse, fleshy, downy beneath. *Calyx* inferior, 5-leaved; leaflets ovate, acute, hairy, imbricated. *Corolla* hypocrateriform, hairy on the outside; the tube inflated in the middle, hairy inside below the stamens; limb contorted; segments equal-sided, oblong, obtuse, slightly unguiculate; throat naked. *Stamens* inserted in the middle of the tube; *anthers* sessile, sagittate, opening lengthwise. *Ovarium* double, many-seeded. *Styles* 2. *Hypogynous scales* none.

J.L.



* PERESKIA aculeata.

West Indian Gooseberry.

 ICOSANDRIA MONOGYNIA.
Nat. ord. CACTACEÆ.*PERESKIA. Suprà, vol. 17. fol. 1473.*

P. aculeata; foliis ellipticis, aculeis in axillâ solitariis demum in caule fasciculatis, floribus subpaniculatis, fructu globoio sepala foliacea gerente.

De Cand. Prodr. 3. 474.*Grossularia americana. Plum. gen. t.* 26.*Cactus Pereskia. Linn. sp. pl.* 671.

I do not find a figure of this common plant in any of our English books; a circumstance that is perhaps to be accounted for by its seldom flowering. In fact it is usually cultivated as a stock on which other species of Cactaceous plants may be grafted, rather than for the sake of its own flowers and fruit.

And yet the latter are not without their beauty. The flowers have not indeed the deep brilliant colours of the more popular plants of the order; but they form fine clusters of white and green cup, and the fruit is like a rich mellow gooseberry; whence the colonial name of West Indian Gooseberry.

In the whole genus *Pereskia*, and in this species in particular, the leaves large and fully organised as in any plants whatever; and the woody matter of the stem is one of the best illustrations that physiologists are acquainted

* See folio 1473.

with, of the plan on which Exogenous trunks are formed. This is easily seen by taking an old stem of *Pereskia aculeata*, and macerating it for a few weeks, when the whole of the horizontal cellular system decays, leaving behind it the longitudinal system in the form of a woody skeleton.

The drawing was communicated in October 1833, from the Garden of W. M. Christy, Esq. of the Clapham Road, by his intelligent gardener, Mr. James Nash.



PEIRÉSKIA* Bléo.

Rose-coloured Pereskia.

ICOSANDRIA MONOGYNIA.

Nat. ord. CACTEÆ Juss. (Introduction to the natural system of Botany, p. 54.)

PERESKIA.—*Sepala* plurima ovario adnata et super fructum sæpè persistentia, foliiformia. *Corolla* rotata, ferè *Opuntiæ*. *Stamina* numerosa, *petalis* multò breviora. *Stylus* filiformis. *Stigmata* spiraliter aggregata. *Bacca* globosa aut ovata. *Semina* in pulpa nidulantia.—*Frutices aut arbores ramis teretibus*. *Aculei ad axillam foliorum solitarii, aut in caule fasciculati*. *Folia distincta, plana, in ordine maxima*. *Flores subpaniculati, solitarii, ramulos terminantes aut sublaterales*.—*De Cand. prodr.* 3. 474.

P. Bleo; foliis oblongis acuminatis, aculeis axillaribus 5-6 fasciculatis, floribus ad apicem ramulorum 2-4 breviter pedunculatis, petalis obovatis retusis. *De Cand. l. c.*

P. Bleo. Humb. et Kunth nov. gen. et sp. pl. p. 69.

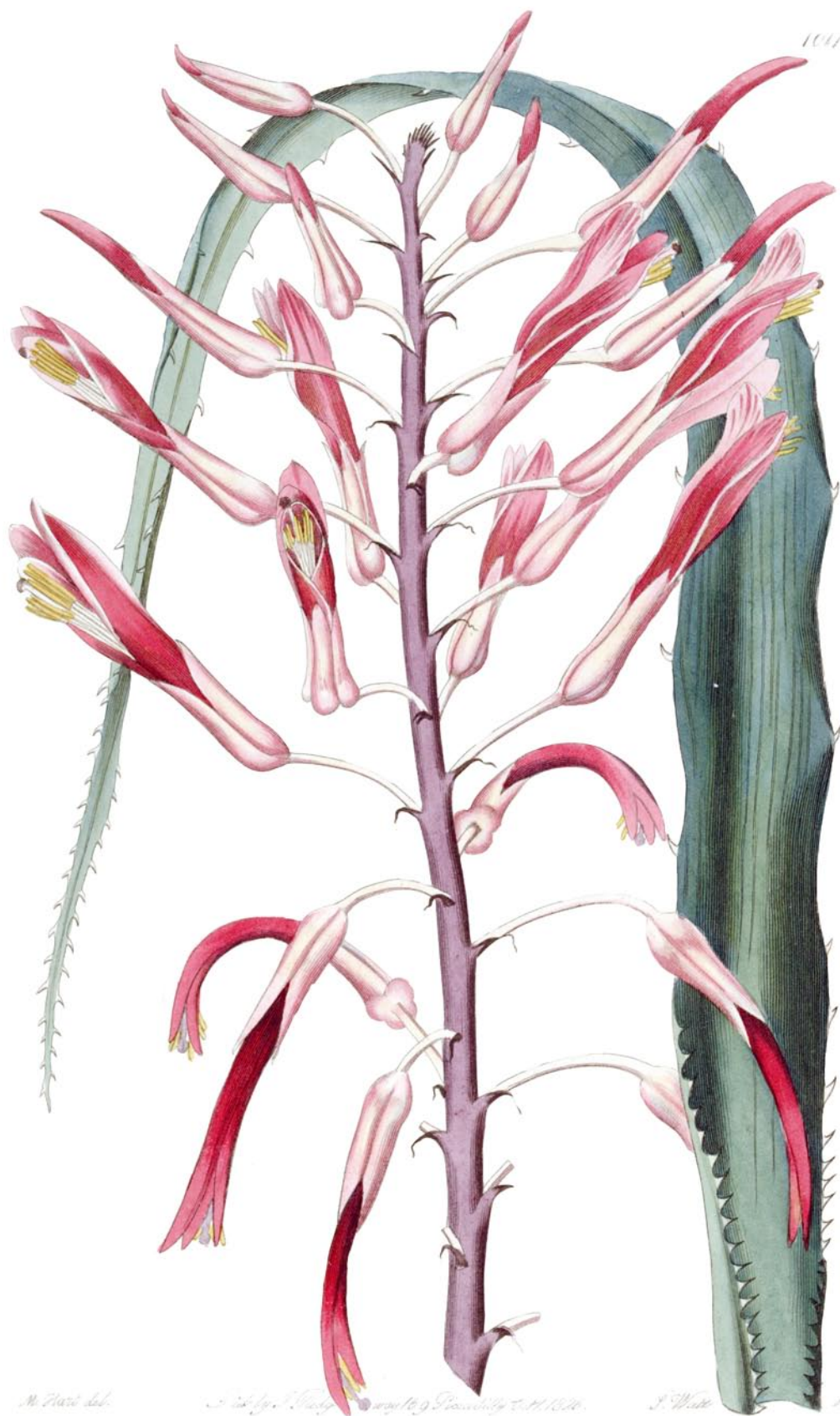
A native of the hottest parts of America. Humboldt found it on the banks of the Magdalena, near Badillas, in New Granada, where it was called Bleo; and Mr. Staples sent it to Mr. Tate, in 1827, from the plains of Mexico.

It is a very handsome plant, and a free flowerer, producing its blossoms in January and the succeeding months. Our drawing was made in Mr. Tate's Nursery in January 1831.

Requires the heat of a dry stove, and the soil and management usually applied to similar succulent plants, except that it will bear more water than many.

J. L.

* Named in honour of Nicolas Fabrice Peireskious, a gentleman of Aix, in Provence, and contemporary of Tournefort.



PITCAIRNIA bromeliæfolia.

Pine-Apple-leaved Pitcairnia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

PITCAIRNIA, *L'Herit.*—*Calyx* inferus duplex uterque tripartitus; interior corollaceus; laciniis basi squamâ instructis. Capsula trigona, trilocularis; loculis polyspermis. *Semina* nuda.—*Caulis herbaceus, erectus, simplex.* Folia *angusta, spinosa.* Flores *spicati, bracteati.* Kunth. synops. 1. 297.

-
- P. bromeliæfolia*; foliis ciliato-spinosis, pedunculis germinibusque glaberrimis.
Ait. Kew. 1. 401. *Willd. sp. pl.* 2. 10.
P. bromeliæfolia, *L'Herit. sert. angl.* 7. t. 11. *Swartz. ind. occ.* 1. 580.
Bot. mag. 824.
Hepetis angustifolia. *Swartz. prodr.* 56.
-

A handsome stove plant, in its native country growing in shady places among rocks and precipices in the island of Jamaica. Our drawing was made in the Garden of Henry Bellenden Ker, Esq., in the summer of 1825.

Not having had an opportunity of examining specimens, we are unable to give a description of the plant.

J. L.



M. Bland del.

Bot. by J. R. G. G. G.

1847

J. W. H. W. H.

PITCAIRNIA flammea.

Flame-coloured Pitcairnia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

PITCAIRNIA. Suprà, fol. 1069.

P. flammea; foliis lanceolatis integerrimis acuminatis subtùs lanuginosis, pedunculis calycibusque glaberrimis, petalis rectis staminibus longioribus.

Herba 2-3-pedalis. Folia lanceolata, erecto-patentia, undulata, striata, integerrima, apice valde attenuata, suprà paululum furfuracea, subtùs glauca, lanuginosa. Scapus erectus, glaberrimus, squamosus; squamæ ovatæ acuminatæ. Racemus strictus, multiflorus. Pedicelli bracteis breviores calycesque glaberrimi. Petala lætissimè sanguinea, recta, secunda, staminibus longiora. Stigmata 3, convoluta.

We are indebted to the rich collection of Richard Harrison, Esq., of Liverpool, for this noble addition to the genus *Pitcairnia*, which flowered in his stove, at Aighburgh, in November 1826. It had been sent from Rio Janeiro, by Mr. William Harrison, now resident at that place, to whose exertions we owe the introduction of a larger number of rare Brazilian plants than to those of any other individual.

The *Pitcairnia suaveolens*, figured at folio 1069, was also flowered by Mr. Richard Harrison, and not in Mrs. Arnold Harrison's hot-house, as we inadvertently stated.

A plant growing two or three feet high. *Leaves* lanceolate, erect, spreading, wavy, striated, quite entire, much tapering to the point, slightly mealy above, glaucous and woolly beneath. *Scape* erect, quite smooth, scaly; *scales* ovate, acuminate. *Raceme* erect, many-flowered. Pedicels shorter than the bractæ, and the calyxes quite smooth. *Petals* bright blood-red, straight, one-sided, longer than the stamens. *Stigmas* 3, convolute.

This species differs from *P. staminea* in not having its petals rolled back, and in the greater breadth of its leaves; from *P. integrifolia* in having smooth calyces and pedicels; from *P. latifolia* in the absence of spines from the base of the leaves, and in the relative proportion of the bracteæ and pedicels; from *P. albiflora* in its broader leaves, which are woolly beneath, and in the great length of the bracteæ; from *P. suaveolens* in the presence of down on the under side of the leaves, and in the smoothness of the pedicels and rachis; and from both the last-mentioned species in the colour of the flowers.

J. L.



PITCAIRNIA suaveolens.

Sweet-scented Pitcairnia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

PITCAIRNIA L'Herit.—*Calyx* semisuperus, tripartitus, basi turbinatus, unibracteatus, sepalis coriaceis, vix convolutis. *Petala* 3, sepalis multò longiora, parallela, sæpius unilateralia, stamina incumbentia, non in tubo convoluta, basi squamosa. *Stamina* 6, libera, alternatim basi sepalorum et petalorum inserta. *Antheræ* innatæ. *Ovarium* triloculare, polyspermum: ovulis minutissimis. *Stylus* filiformis. *Stigmata* 3, linearia, convoluta. *Capsula* acuminata, 3-ocularis, trivalvis; valvularum marginibus introflexis seminiferis. *Semina* minuta, utrinque seta caudata.—Herbæ terrestres (*Americæ æquinoctialis*), foliis radicalibus ensiformibus lepidotis. Flores pedunculati, racemosi, v. paniculati.

P. suaveolens; foliis lineari-ensiformibus acuminatis integerrimis glabris, racemis multifloris elongatis, petalis oblongis undulatis galeatis, calycibus rachique pubescentibus, bracteis pedicellis multò longioribus.

Caulis 2-pedalis, erectus, glaber, foliosus. Folia omnia lineari-ensiformia, in apice valdè acuminata, integerrima, letè-viridia, inferioribus subtùs lepidotis, ceteris glabris. Racemus erectus, elongatus, multiflorus, rachi pedicellis calycibusque pubescentibus. Bracteæ ovato-lanceolata, acuminatissimæ, pedicellis multò longiores. Flores albi, suaveolentes. Calyx semisuperus, basi turbinatus, sepalis lanceolatis, papyraceis, pallidè viridibus, corolla ad minimum duplò brevioribus. Petala oblongo-lanceolata, obtusa, hinc versa, concava, quasi galeata, in stamina incumbentia, non in tubo convoluta, sed parallela, marginibus basi imbricatis, basi squamulam lunulatam inter ipsa et stamina gerentia. Stamina 6, in imâ basi petalorum et sepalorum inserta. Filamenta filiformia. Antheræ lineares, innatæ (basi insertæ). Ovarium semisuperum, ovatum, trigonum, triloculare, in stylo filiformi acuminatum. Stigmata 3, linearia, convoluta.

We are indebted for this new species to the same lady by whom we were supplied with the subject of the last plate, and whom we so often have to thank for her communications to this work. It was sent from Rio Janeiro, by William Harrison, Esq., and blossomed in the stove, in June 1826.

All the species of *Pitcairnia* are readily cultivated in almost any soil, in a good stove; but we have observed them thrive most when plunged in the tan-pit, and allowed to root through their pots into the tan.

Differs from *Pitcairnia albiflos* of Mr. Herbert, in being a taller and more robust plant, in having the rachis, pedicels, and calyx downy, and especially in the bracteæ being much longer than the pedicels. It is also sweet-scented, which *P. albiflos* is not. The flowers of the latter appear, from our wild Brazilian specimens, to assume a corymbose appearance, while those of *P. suaveolens* grow in an elongated raceme.

Stem about two feet high, erect, smooth, leafy. *Leaves* all narrowly sword-shaped, very much tapering to the point, quite entire, bright green, the lower only being mealy beneath, the others quite smooth. *Raceme* long, erect, many-flowered, the rachis, pedicels, and calyx, being pubescent. *Bracteæ* ovate-lanceolate, acuminate, much longer than the pedicels. *Flowers* white, sweet-scented. *Calyx* half-superior, turbinate at base, with lanceolate, papery sepals, of a pale-green colour, and at least twice as short as the corolla. *Petals* oblong-lanceolate, obtuse, twisted to one side, concave, with a kind of galeate appearance, lying over the stamens, not rolled together into a tube, but parallel, with their margins overlapping at the base, and having a small lunulate scale between their base and the stamens.

J. L.



PORTULACA foliosa.

Guinea Purslane.

DODECANDRIA MONOOYNIA.

Nat. ord. PORTULACEÆ. *Jussieu gen.* 312. *Div. I.* Fructus unilocularis.
PORTULACA. Suprà fol. 792.

P. guineensis, foliis subulatis, calycibus pilosis, involucro polyphyllo, floribus subternis, petalis retusis. *Lindley MSS.*

We had no opportunity of seeing the plant after it was drawn, and are obliged to Mr. Lindley for the above specific distinction.

Introduced by the Horticultural Society, in whose garden the drawing was made. The seed was sent to the Society from Acera, on the west coast of Africa, in 1822, by Mr. George Don, one of the Society's collectors.

* PORTULACA Gilliésii.

Dr. Gillies' Purslane.

POLYANDRIA MONOGYNIA.

Nat. ord. PORTULACEÆ, *Juss. (Introduction to the Natural System of Botany, p. 1.59).**PORTULACA. Supra, fol. 792.*

P. Gilliesii; caulibus suberectis basi ramosis, foliis oblongo-cylindraceis subcompressis obtusis punctatis, pilis axillaribus fasciculatis erectis appressis, floribus terminalibus, petalis calyce longioribus. *Hooker in Bot. Mag. t. 3064.*

Dr. Gillies, to whom we are so much indebted for many illustrations of the Botany of Chili and of the neighbouring province of Mendoza, brought seeds of this plant to the Botanic Garden of Glasgow, whence it has been liberally distributed. We are informed by Dr. Hooker that it is a native of the plains of Mendoza. This circumstance will point out the cultivation it requires; for the dryness of that climate is so well known, that it may be easily understood that the only chance of managing this plant successfully, consists in preserving it, during winter, in a well ventilated dry greenhouse or stove, and allowing it water only when in a growing state, and then only in moderate quantity.

It is a truly splendid plant; but to be seen in perfection it should be exposed to the greatest heat and the brightest light that our summers will supply. It then opens its rich crimson flowers in considerable quantity, and lying as they do upon a little bed of neat deep green leaves, the prettiest effect imaginable is produced.

It is a perennial, and is propagated readily by cuttings. Our drawing was made last July in the garden of the Horticultural Society.

* An ancient Latin name, whose supposed origin has exercised the ingenuity of the learned, but concerning which we find nothing worth explaining or controverting.—*Smith.*



M. Hort. del.

Publ. by J. Ridgway 170 Broadway Apr. 1. 1826.

J. Watts. sc.

PORTULACA pilosa.

Hairy Brazilian Purslane.

DODECANDRIA MONOGYNIA.

Nat. ord. PORTULACEÆ. *Jussieu gen.* 312. *Div. I.* Fructus unilocularis.

PORTULACA. *Cal.* superus bipartitus, tardiùs basi circumscissus et deciduus. *Petala* 5, rariùs 4, basi calycis inserta, ipsoque longiora, sessilia, æqualia. *Stamina* crebra, ibidem inserta, corolla breviora. *Filamenta* libera. *Antheræ* biloculares, longitudinalitèr dehiscentes. *Ovarium* (*germen*) inferum vel semiinferum, uniloculare; *ovulis* crebris. *Stylus* unus, superne 3-8-fidus. *Capsula* unilocularis, polysperma, circumscissa. *Placentæ* tot quot stigmata, fundo capsulæ affixæ, quibus semina per podospermia (funiculi umbilicales) insident. *Semina* subcochleato-lenticularia, tuberculato-scabra. *Integumentum exterius* crustaceum fragile, *interius* tenuissimè membranaceum. *Embryo* teres endospermis (albumini) centrali farinoso circumpositus. *Radicula* supera. *Herbæ succulentæ.* Folia *sparsa, interdum subverticillata, carnosa, integerrima, in axillis fasciculo pilorum instructa.* Flores *terminales, solitarii, gemini, aut plures congesti, bracteis pilisque involucrati.* Corollæ *flavæ, roseæ, aut purpureæ.* Kunth nov. gen. et spec. 6. 71.

P. pilosa, foriis sublati alternis; axillis pilosis, floribus sessilibus terminalibus. *Linn. sp. pl. ed.* 2.

Portulaca pilosa. *Mill. dict. ed.* 8. n. 2. *Wild. sp. pl.* 2. 860. *Hort. Kew. ed.* 2. 3. 147.

Portulaca curassavica, angusto longo lucidoque folio, procumbens. *Commel. hort. amst.* 1. 9. tab. 5.

Portulaca curassavica languinosa procumbens. *Herman. parad.* 215, cum tab.

Anacampseros supina minor, foliis linearibus turgidis, floribus summis ramulis confertis. *Brownejam.* 234.

Said to have been cultivated in the King's garden, at Hampton Court, in 1690.

Drawn from a plant which flowered in the collection of Comtesse de Vandes, at Bayswater.



PORTULACA splendens.

Garden Variety.

We presume this to be a mere variety of *Portulaca Thel-lusonii*, figured at plate 81 of our volume for 1840; but if so it is one of singular beauty. Its origin is however unknown to us. Seeds of it were purchased of Mr. Charlwood, in Covent Garden, for the Horticultural Society, and in the Chiswick Garden it flowered in the autumn of 1842.

It is a charming tender annual, about a foot high, which flowers most abundantly from July to September, if treated in the following manner.

The seed should be sown about the middle of March in pots filled with a mixture of sandy loam, old lime rubbish, and well decomposed cow-dung in equal portions. The plants should be raised on a hot-bed, and when large enough should be potted off singly into small sixty-pots, filled with the same kind of compost as that in which the seeds were sown. The young plants when potted should be again returned to the hot-bed, and when well established, their pots being well filled with roots, should be re-potted into upright thirty-twos, draining the pots well, and covering the surface of the soil with a thin covering of fine sand.

After this the pots should be placed on the front shelf of a greenhouse, where they are freely exposed to the sun, but guarded from wind and rain, the first of which destroys the flowers, and the latter the plants. Care must also be taken in watering the plants; as on this much depends of the success in their management; for they are very subject to damp off close to the soil.

It is also possible to grow this Purslane in the open ground in a fine dry season, if it is planted in a hot situation, where it can be protected from heavy rain and wind, but it will not, under such circumstances, display all its beautiful effects.



PORTULĀCĀ Thellusōnī.

Mr. Thelluson's Purslane.

ICOSANDRIA MONOGYNIA.

Nat. ord. PORTULACACEÆ.*PORTULACA. Botanical Register, vol. x. fol. 792.*

P. Thellusonii; annua, caule erecto, axillis filamentosis, foliis alternis subcylindricis acuminatis obtusis floralibus subverticillatis, floribus ad apices ramorum congestis sessilibus, petalis bilobis concavis sepalis subæqualibus pluries longioribus.

P. grandiflora rutila. *Bot. Reg.* 1839. misc. no. 114.

Let not the reader imagine the accompanying figure to be an exaggeration, either as to the size of the flowers or their colour, for he may be assured on the contrary that art is unable to do justice to the brilliant appearance of this most beautiful annual, which grows about a foot high, and flowers nearly all the summer, if sown in pots filled with a mixture of old lime-rubbish and well rotted dung or decayed leaf-mould, and fully exposed to the sun. It should be kept in a sheltered place, for although it will grow tolerably well if planted in the open border, the flowers are so delicate that in such situations they are much damaged by wind and rain. The best place for it is in a south window, or on the south side of a greenhouse, or at the foot of a hot south wall in a sequestered nook, especially if among a few blocks of lime-stone rock.

It was sent from Florence to the Horticultural Society by the Hon. Frederick Thelluson, now Lord Rendlesham, and I had erroneously regarded it as a variety of *Portulaca grandiflora*, which varies in the colour of its flowers; suspecting indeed that it might have been a hybrid between that plant and *P. Gilliesii*. It however proves so permanent in its habits as to render that supposition improbable, and seems to have all the signs of a natural species. Its deeply two-lobed

June, 1840.

M.

petals form a good mark of distinction from that species; while its longer and taper-pointed leaves, annual habit, and more spreading petals seem to separate it equally from *P. Gilliesii*.

The seeds require to be sown on a hot-bed, like those of the other annuals generally called tender.



Miss Drake del^o

Pub. by J. Ridgway 169 Piccadilly Feby 1st 1840

J. Barclay sc

PŪYĂ cœrŭlěă.

Blue Puya.

 HEXANDRIA TRYGYNIA.

Nat. ord. BROMELIACEÆ.

PUYA Molina. *Sepala* subsæqualia, mox convoluta. *Petala* inferne convoluta, basi appendiculata, mox spiralia. *Stamina* inclusa; *antheræ* lineares, basi emarginatæ. *Ovarium* semisuperum, stigmatibus linearibus spiraliter convolutis. *Capsule* supera, cartilaginea, loculicido-trivalvis; *semina* atra, compressa, marginata.

P. cœrulea; foliis linearibus acuminatissimis spinoso-dentatis glabriusculis, scapo paniculato, floribus pedicellatis bracteis oblongis concavis membranaceis acuminatis longioribus, petalis plumbeo-cœruleis obtusis sepalis multò longioribus.

Pourretia cœrulea. *Miers' travels in Chile*, p. 530. absq. descr.

Folia 2-pedalia, canaliculata, subtis obsolete furfuracea. Scapus 3-4-pedalis, foliis in vaginas membranaceas serratas mutatis arcè imbricatus. Bracteæ membranaceæ, spathaceæ, infimæ serratæ, superiores inermes, flores pedicellatos imbricantes. *Sepala* ovata, herbacea, corollâ plus duplò breviora. *Petala* oblonga, obtusa, convoluta, basi squamâ staminis basin amplectante aucta; post anthesin convoluta et in colorem roseum mutata. *Stamina* alterna breviora; ea petalis opposita longiora; antheris linearibus basi sagittatis. *Ovarium* semisuperum, 3-loculare, polyspermum; placentis didymis; stylus tripartibilis; stigmatibus unilateralibus convolutis.

A specimen of this singular plant was exhibited in 1888, at one of the meetings of the Horticultural Society in Regent Street, by Mr. Lambert, under the name of *Pourretia coarctata*. I am informed by that gentleman that it is the species so called by Mr. Miers, and that he has cultivated it, with *Pourretia coarctata*, a finer plant, having stems seven or eight feet high, each bearing several hundred flowers, and *P. rubricaulis*, in a greenhouse nearly filled with them.

From *PUYA*, the *Pourretia* of the Flora Peruviana, as defined by the younger Schultes, in his revision of the Bromeliaceous order, in Römer and Schultes' *Systema Vegetabilium*, it differs in its ovary being only half superior, in having scales

at the base of the petals, and in its calyx not becoming convolute after flowering; but I have no doubt that the character assigned to *Puya* in the above work is erroneous, and requires emendation. The ovary is half inferior like that of a *Pitcairnia*; but the capsule is almost wholly superior, and this is one of the more material characters of *Puya*.

It is a showy half-hardy perennial, looking like a narrow-leaved Pine-apple, and a few years since was common in collections, but so many specimens were destroyed in the severe winter of 1837-8, that most persons lost it, and it will now be necessary to procure seeds again from Valparaiso, where it is probably common. If not injured by frost, it will grow in the poorest soil, and the driest situations, and would form a most picturesque ornament of rough rocky banks in the warmer parts of England and Ireland.

I am not aware of the quality of the fibre contained in its leaves, but from their toughness, and its relation to the plants that yield Pita, and New Zealand flax, it is probable that it would be worth examination in this respect.

There seems no reason for preferring the generic name *Pourretia* to the more ancient *Puya* of Molina.



PŪYĀ heterophŷllă.

Various-leaved Puya.

 HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

PUYA. Botanical Register, 1840. fol. 11.

A. *heterophylla*; bulboas, foliis primordialibus basi coriaceis concavis dilatatis sursum subulatis corneis spinosis serratis; secundariis teneris lanceolatis inermibus multo longioribus parcissime pruinosis, spicâ simplici sessili imbricatâ foliis multo brevioribus, bracteis lanatis calycibus brevioribus.

Sepals *lineari-lanceolata, cornea, acuminata, carinata, sublanata, petalis breviora*. Petala *cornea, ligulata, convoluta, basi squamâ duplici serratâ instructa*. Stamina 6, *basi perianthii inserta; antheris linearibus*. Ovarium *basi immersum, maximâ pro parte liberum, triangulare, pyramidatum, 3-loculare, polyspermum; stylo filiformi; stigmatibus convolutis*.

A very pretty plant, evidently belonging to the genus *Puya*, and most remarkable for bearing two kinds of leaves. Those at the base of the plant arise from tough, concave, broad, horny petioles, which overlies each other, forming a kind of bulb, and are extended into narrow, hard, serrated, spiny, brown processes about two inches long. The leaves, on the other hand, which are last formed, are thin, lanceolate, bright green, and more than eighteen inches long when full grown, and bear no resemblance to the first. The flowers are arranged in a close, oblong spike, composed of imbricated woolly cartilaginous pale green bracts, occupying the centre of a bulb of spiny leaves in the place of the thin leaves before mentioned.

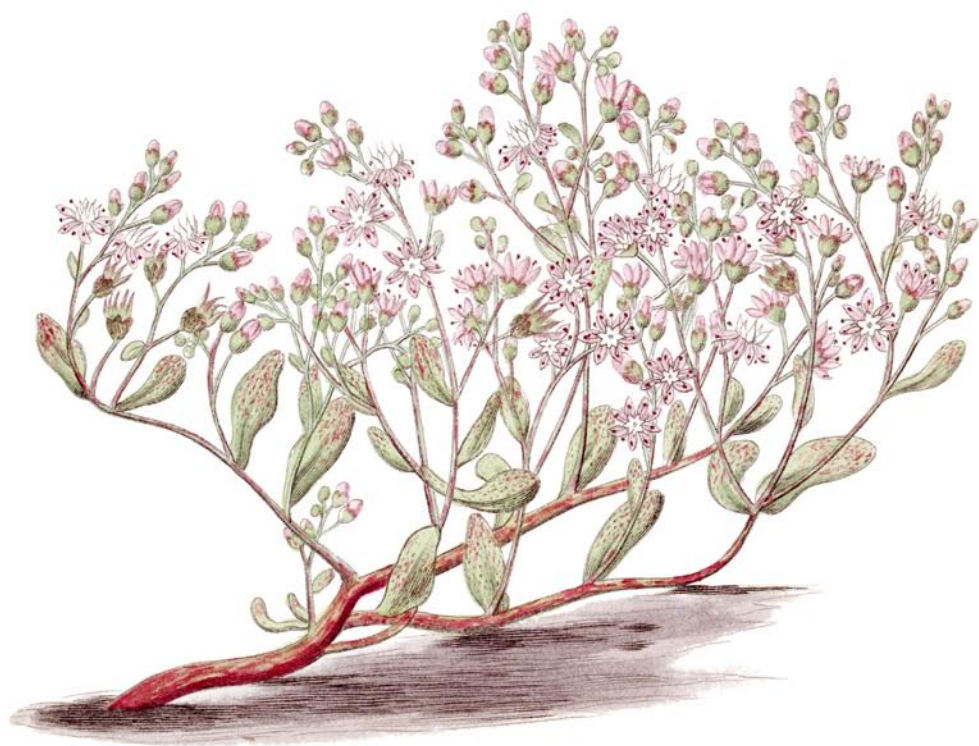
I am indebted for my knowledge of it to John Rogers, Esq. Jun. of Sevenoaks, with whom it flowered in May 1840, and who has given me the following memorandum concerning its history and habits.

December, 1840.

2B

“I received the plant from Mr. Parkinson from Mexico, in 1838, and stuck it into a pot loosely filled with *Tillandsia*, in which this plant and the Epiphytes which accompanied it had been packed. It flourished so well in its temporary abode, the roots clothing the inside of the pot, that I never disturbed or planted it otherwise; and this summer it flowered for the first time. When growing it has received abundance of water; indeed I believe it stood in a pan always full. When the leaves began to turn yellow, it was set on the floor of the house and kept dry and cool for two months or more till it showed flower. It has been grown close to the light, in a stove of moderate temperature, not very damp.

“Its spiny processes are excessively sharp and brittle, rendering it almost dangerous to touch the plant; and the leaves when full grown are eighteen inches to two feet long, and flexible, hanging about more loosely than those of most similar plants.”



SEDUM cæruleum.

Barbary Stonecrop.

DECANDRIA PENTAGYNII.

Nat. ord. SEMPERVIVÆ. *Jussieu gen.* 307.*SEDUM. Suprà vol. 2. fol.* 142.*Div. Teretifolia.**S. cæruleum*, foliis oblongis alternis obtusis basi solutis, cymâ bifidâ glabrâ. *Vahl symb.* 2. 51.*Sedum cæruleum. Willd. sp. pl.* 2. 766.*Sedum azureum. Desfont. flor. atl.* 1. 362.*Sedum vermiculare pumilum glabrum*, floribus parvis ceruleis. *Shaw specimen.* 46. n. 550. fig. 550.

Caulis sæpè procumbens, 3-4-uncialis teres lineolis rubris interruptis crebris pictus, nunc ramosissimus ramis adscendentibus. Flores parvuli, violaceo-pallentes, numerosi, paniculato-racemosi; racemi ramulorum terminales, infernè subfoliosi, pedicellis alternis unifloris filiformibus patentissimis sub-æquantibus flores: bracteolæ caducæ, membranacæ, rubræ, subulatæ, minutæ. Fol. teretiuscula, subspathulato-oblonga, obtusa, lineolis rubris punctatæ, suprà versus basin concava v. canaliculato-depressa. Cal. crassus, cupulatus, virens, punctis linearibus rubris aspersus, duplo brevior corollâ, 7-fidus, persistens, segmentis obtusis. Petala 7, oblonga, obtusula, patentia, caduca, siccatione intensè cærulescens: glandulæ crystallinæ, minimæ, oblatae, bilobo-emarginatæ, singula basi cujusque germinis inserta. Pistilla 7, æqualia corollæ; germ. oblonga incurvescentia, dorso planiuscula indè introrsum in aciem attenuata, primò albo-micantia, indè herbaceo-virentia atque lineolis rubris punctata, infernè intus glanduloso-muricata, stylo albo continuo setaceo-rostrata. Stam. corollæ æqualiæ, patentia; fil. setiformia, alba: anth. atro-violacæ, oblato-subrotundæ, didymæ, à dorso infixæ.

A diminutive species observed at different periods in the clefts of rocks on the Coast of Barbary by Messrs. Shaw, Vahl, and Desfontaines; perhaps the smallest in the genus, where it is remarkable for the pale violet-colour of the corolla, which turns, when dry, to a full bright blue.

It is not recorded in the Hortus Kewensis; and has been probably now first introduced by Mr. Kent, in whose collection at Clapton it flowered last summer in the greenhouse.

Stem sometimes lying along the ground, 3-4 inches long, round, smooth, in some cases very much branched, dotted with shortly broken thickset tile-red lines. *Flowers* numerous, small, paniculately racemose, *racemes* ter-

minating the branchlets, sometimes partially leaved at the lower part, *pedicles* alternate, oneflowered, filiform, outspread, about equal to their flower: *bractes* membranous, minute, red, subulate, caducous and seldom found on the plant. *Leaves* subcylindrical, subspatulately oblong, obtuse, marked with red linear dots, hollowed or channelled on the inside near the base. *Calyx* cupular, 7-cleft, green with red linear dots, twice shorter than the corolla, persistent, segments obtuse. *Petals* 7, oblong, bluntish, spreading, caducous: *glandule* crystalline, very small, oblate, indented at the top with a deepish sinus, one at the base of every germen. *Pistils* 7, even with the corolla. *Germens* 7, slightly in-bowed, broad and flattish at the back, tapering inwards to an edge, at first white and glittering, at last of the substance and colour of the foliage, glandularly muricated at the base on the inside, beaked at the top by the white continuous *style*. *Stamens* 14, even with the corolla spreading; *filaments* setaceous, white; anthers dark-purple, twin, roundish.



M. Hems. del.

Collected by J. Ridgway 10th December Feb. 7. 1891.

W. H. H. & Co.

SÉDUM* Cepæa.

Panicled Stonecrop.

DECANDRIA PENTAGYNIA.

Nat. ord. CRASSULACEÆ Juss. (*Introduction to the natural system of Botany*, p. 161.)

SEDUM.—*Suprà*, vol. 2. fol. 142.

** *Planifolia*, floribus albis, rubris, aut cæruleis. Dec. prodr. 3. 402.

S. *Cepæa*; caule herbaceo terete pubescente, foliis planis integerrimis, infimis subspatulatis, superioribus oblongis linearibusve, floribus paniculatis, petalis in acumen aristatum desinentibus.—*Dec. l. c.* 404.

S. *Cepeea*. Linn. *species*, pl. 617.

S. *paniculatum*. Lamarck *sec. Decand.*

S. *galioides* Allioni *ped. t.* 65. f. 3. , *

S. *spatulatum*. Waldst. et Kitaib. 2. p. 108. t. 104.

S. *tetraphyllum*. Smith *prodr. fl. Græc.* 1. 309.

S. *alsinefolium*. Allioni *ped. t.* 22. f. 2.

Anacampseros Cepæa. Haworth.

} Varr. *sec.* Decandollium

A very common plant in the south of Europe, where it assumes different appearances according to the situations in which it grows; from these several erroneous species above noticed, after Decandolle, have been formed. Under its common appearance it is found every where upon stones, rocks, and walls, on all the northern coast of the basin of the mediterranean. It appears under the form of *S. Alsinefolium* in shady places in Piedmont, on the mountains of Roaschia and elsewhere; as *S. galioides* in Piedmont and Corsica; as *S. spatulatum* in the south of Hungary; as *S. tetraphyllum* in hot places in the Morea. It is particularly variable in the degree of length

* Said to have been named à semper sedendo, because it is always seated, as it were, upon stones, &c. This *Cepæa* is the κηπαῖα, of the Greeks, according to some.

of its leaves, and in their situation upon the stem. Mr. Bentham has remarked, in his *Critical Catalogue of the Plants of the Pyrenees*, that the upper leaves are almost always verticillate, and that very often they are all so.

We are chiefly induced to give a figure of this species from no representation of it having yet found its way into any English work.

It is an annual, and very well adapted to ornamenting rock-work: it also grows well in the common border. Our drawing was made in the Garden of the Horticultural Society, where it had been received from a continental Botanic Garden, under the erroneous name of *S. Guettardi*.

J. L.



SEDUM ternatum.

Three-leaved american Stone-crop.

DECANDRIA PENTAGYNIA.

Nat. ord. SEMPERVIVÆ. *Jussieu gen.* 207.

SEDUM. Cal. inferus, 5-partitus. *Pet.* 5, imo calyci inserta, calycinis divisuris numero æqualia et iisdem alterna. *Stam.* dupla quorum alterna petalorum ungui inserta, alterna imo calyci: *anth.* subrotundæ. *Germina* petalis numero æqualia, basi interiori juncta, exteriori glandulosa glandulis squamiformibus; *styli* et *stigmata* totidem. *Caps.* totidem, 1-loc., polyspermæ, intus bivalves, marginibus valvarum seminiferis. *Herbæ succulentæ; folia alterna, plana aut teretia; flores corymbosi, axillares et sæpiùs terminales.* *Jussieu gen.* 307.

S. ternatum, pumilum, repens; foliis planis rotundo-spathulatis ternis, cyma subtristachya, floribus sessilibus, octandris, centro decandro. *Pursh amer. sept.* 1. 324.

Sedum ternatum. *Michaux bor. amer.* 1. 277. *Persoon syn.* 1. 512. *Hort. Kew. ed.* 2. 3. 112.

Sedum deficiens. *Donn cant. ed.* 6. 126.

Sedum octagon. *Hortulanis.*

Sedum americanum. *Herb. Banks.*

Sedum annuum caule compresso, foliis obversè ovatis. *Gron. virg. ed.* 2. 71.

Sedum saxatile floribus albis, foliis succulentis subrotundis, caule rubente. *Clayt. Herb. n.* 891.

Anacampteros ternata. *Haworth succ.* 114.

Herba perennis caespitosa: caules stricti, foliati, floriferi sub 4-unciales, pruinosi, subrubentes. Folia caulina plana, crassa, terno-verticillata, verticillis decussatis, glabra, semuncialia v. infrà ad uncialia v. suprà; floralia ovalilanceolata. Inflorescentia terminalis, numerosa, sæpiùs trifurco-tristachya flore solitario in centro trifurcationis; spicæ recurvo-divergentes, alterno-secunda, foliatæ, foliis ponè spicam alternantibus cum floribus. Cal. herbaceus, 4-partitus, segmentis lineari-oblongis, obesis, obtusiusculis, corollâ $\frac{1}{3}$ -parte brevior. Cor. alba, 4-partita, semunciam transversa, stellata, laciniis angustius lanceolatis, acuminatis, canaliculatis. Stam. 8, $\frac{1}{3}$ breviora corollâ, æquantia pistilla: anth. erectæ, sagittato-ovatæ, rubido-brunneæ. Germ. 4, alba, erecto-stellata, oblonga, attenuata, intus suturâ marginata et basi rimâ labris tumidiusculis prominentioribus hiulca: stylus brevis continuus subulatus: stig. punctum acutum. Squamæ hypogynæ minutæ denuò lutescentes, oblongo-quadratæ, subdentiformes.

The species was recorded in the Flora virginica of Gronovius (1743), but seems to have missed its place in all subsequent enumerations of plants, until Michaux's work appeared (1803), in which it stands under the present name.

A native of North America, where it is found on rocks in the western parts of Pennsylvania, Virginia, and Carolina. We know of no figure of it; although one of the handsomest and fittest plants for covering walls or rock-work of any in our gardens; into which it was first introduced by Sir Joseph Banks in 1789. Begins to flower in June, and continues to do so abundantly for a considerable time.

Soon forms a large close tuft, with stems about four inches high. *Leaves* flat, succulent, thick, in whorls of three each decussating the one the other at small distances, from half an inch to more than an inch in length, those on the stem which do not belong to the inflorescence, obovately spatulate, or with a roundish blade narrowed downwards, those more immediately connected with the inflorescence alternate, much narrower, oval lanceolate. *Flowers*, terminal, octandrous, generally in three many-flowered spikes, deriving from the same point at the summit of the stem, and having a single decandrous flower seated at their confluence, recurvedly divergent, leafy, with flowers pointing inwards, and alternating with the floral leaves, the upper ones of which are disposed in a double row behind them. *Calyx* herbaceous, 4-parted, with thick linear oblong bluntish segments. *Corolla* white, 4-parted, about half an inch across, stellate, with narrow lanceolate channelled divisions. *Stamens* 8, a third shorter than the corolla: *anthers* reddish brown. *Germens* 4, white, stellate, oblong-acuminate, with a suture along the inner margin, more prominent and partly dehiscent towards the base, *Hypogynous scales* minute, oblong, squared, becoming yellow.

The drawing was made from a plant at the nursery of Messrs Lee and Kennedy, at Hammersmith. A hardy plant, requiring the common treatment of the other sorts.



SEMPERVIVUM arboreum.

Tree-Houseleek.

DODECANDRIA DODECAGYNIA.

SEMPERVIVUM. Cal. inferus 6-12-partitus. Petala 6-12, imo calyce inserta, calycinis divisuris alterna. Stamina totidem alterna petalis: anth. subrotundæ. Germ. 6-12, basi interiori juncta, exteriori glandulosa: styli & stigmata totidem. Caps. 6-12, uniloculares, polyspermæ, intus bivalves, marginibus valvarum seminiferis. *Herbæ aut suffrutices; folia succulenta, alterna, plana, in rosam terminalem congesta; flores corymboso-cymosi terminales, in S. arboreo 20-andri.* Jussieu gen. 307.

S. arboreum, caule arborescente lavi ramoso foliis cuneiformibus glabriusculis ciliatis, ciliis patulis mollibus. Hort. Kew. 2. 147.

Sempervivum arboreum. Linn. sp. pl. 1. 664. Mill. dict. ed. 8. n. 5. Desfont. fl. atl. 1. 389. Brotero ft. lusit. 2. 378. Smith prodr. fl. græc. 2. 334. Quer fl. espan. 6. 281. Plant. grass. 125. Willd. sp. 2. 930. Hort. Kew. 2. 3. 171.

Sedum majus arborescens. Bradl. succ. Dec. 4. 1.

Sedum arborescens. Besl. eyst. aut. ord. 3. fol. 8. fig. 1.

S. arborescens majus græcum. Lob. ic. 379.

Sedum majus legitimum. Clus. hist. 2. 58.

Joubarbe arborescente. Lam. encyc. 3. 288.

Frutex succulentus, sempervirens. Caudex carnosolignescens, cubitalis ad orgyalem usque, nunc brachium crassus, erectoramosus; rami crassi, teretes, fuscuscentes, nudi, læves, cicatrizati, non florigeri foliis in rosam patulam nutantem 3-4 uncias transversam approximatis comati. Folia ambientèr sparsa, numerosa, ex inferiorum casu terminalia, sessilia, coriaceo-crassam cuneato-spathulata, lætè viridantia, ciliis tenuissimis albis marginata. Caules terminales, virides, carnosi, teretes, infra flores laxius consiti foliis minoribus deciduis sensim decreescentibus, terminati thyrsolaxo, multifloro, patulo subvillosus, bracteis sphacelatis caducis interspersus: pedunculis divisus, pedicellis 1-floris. Cal. carnososucculentus, 9-11 partitus, extus lanuginosus. Cor. paulò major, lutea, primò imbricato-contorta, indè stellato-divaricata, acuta. Glandulæ squamiformes membranaceæ alba apice eroso-dentatæ, totidem ac germina. Stam. 18-22, alterna inserta basi petalorum, alterna in imo calyci: fil. lutea, subulata, corollæ æqualia, patentia: anth. luteæ, subrotundæ. Germ. 9-11 in orbem digesta, intus basi connexa, rostrata stylis totidem divergentibus: stigmata puncta acuta. Caps. leguminosæ, oblongæ, rostratim recurvæ, extrorsum convexæ, introrsum dehiscentes: sem. unilateralia, subrotunda.

One of our most common rate greenhouse-plants, and of the longest standing, having been cultivated here from before 1640; but is not very frequently seen in bloom, and is rather impatient of frost. Clusius notices its having been

introduced into the collections of the Low Countries in his day, but as not having then flowered.

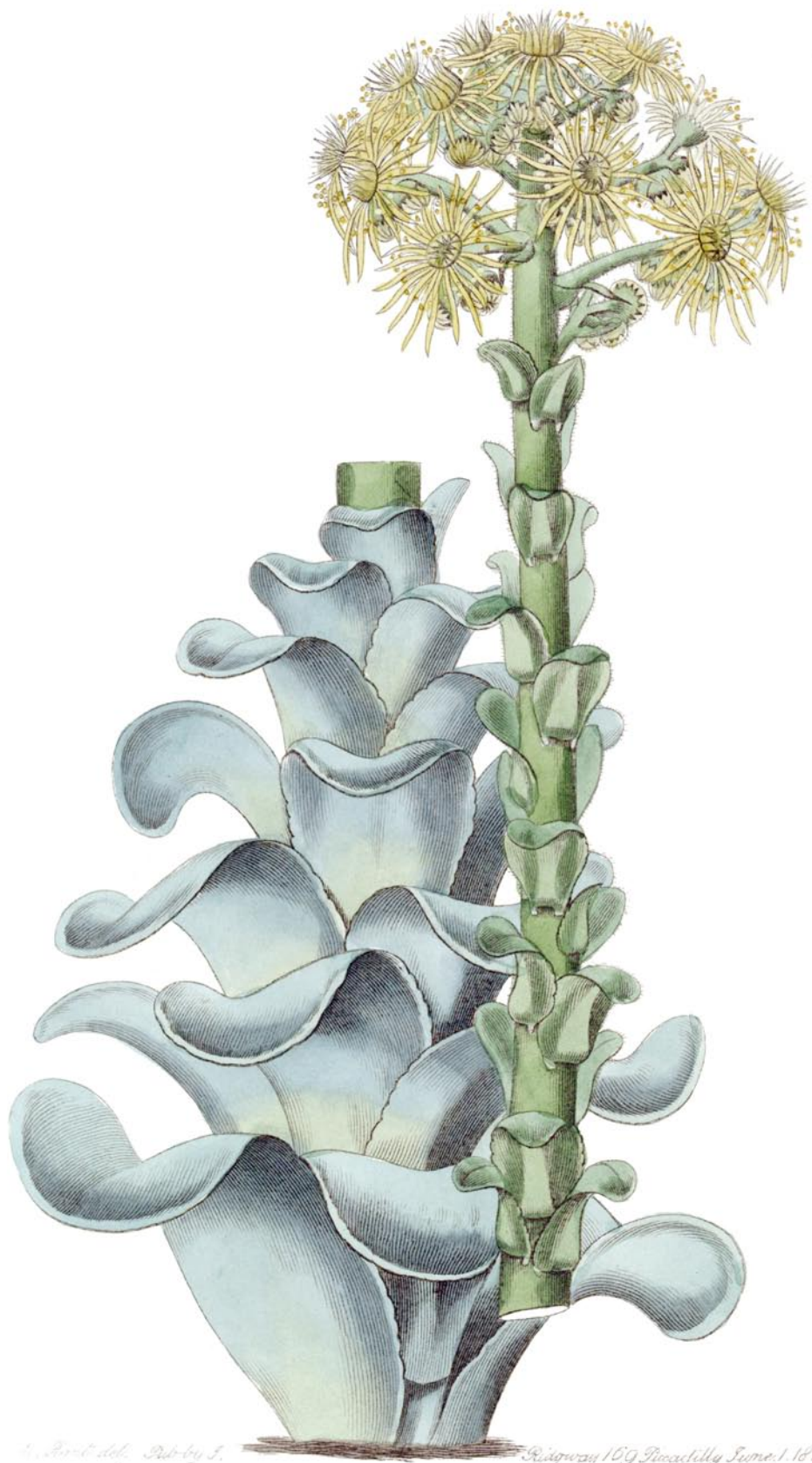
Native of the Levant. Frequent in Portugal, where, altho' completely naturalized, Brotero suspects it is not aboriginal. Its favourite spots are rocks, old walls, and ruins. Dr. Sibthorpe found it in the island of Cyprus; the spanish botanist, Don Josef Quer, in Gallicia, growing on the walls which environ the city of Vigo.

An arborescent succulent shrub, from three to seven feet in height; well characterized by the name of Tree-House-leek, being what we might conceive our own humble native stemless weed of the same generic name would become on assuming the dimensions and characters of a tree. The *caudex* or trunk is sometimes as thick as a man's arm, proliferous, with upright thick brown branches of a consistence between succulent and ligneous, round, with a smooth shining bark, scarred by the vestiges of the fallen foliage. *Leaves* succulent thick terminal, disposed in the form of a full-blown rose from 3 to 4 inches over and inclined outwards, sessile, between cuneate and spatulate, of a light green colour, surrounded by a tender narrow white ciliate edge. *Flower-stem* from the centre; beset below by numerous smaller deciduous leaves, beyond these branching out into a large handsome *thyse*, with flowers of a golden-yellow colour; the *peduncles* of which are divided and sub-pubescent. *Corolla* stellate, pointed. *Glands* at the base of the germens in the form of scales.

The drawing was made last summer from a plant in the greenhouse at Mr. Weeks's nursery, King's Road, Chelsea.



a An outline of a flower, showing the position of the scale-shaped membranous glands, situated at the base of the germens.



A. P. del. Pub. by L.

Riagway 109 Poochilly June 1. 1825.

SEMPERVIVUM caliciforme.

Chalice-formed Sempervivum.

DODECANDRIA DODECAGYNIA.

Nat. ord. SEMPERVIVACEÆ.*SEMPERVIVUM* L. V. *suprà* vol. 2. fol. 99.

S. caliciforme; foliis levigatis nudis glaucis densissimè imbricatis capitulo caliciformi incurvatim elegantissimè collectis. *Haworth suppl.* 69.

This rare species of *Sempervivum* was introduced to the gardens of this country by the unfortunate Christian Smith, who collected it, with many other curious plants, in the island of Madeira, while touching there on his way to that unhappy climate whence he was destined never to return.

We do not find the species described in any other work than that of Mr. Haworth, which we have quoted. The specimen with which we were furnished was so imperfect, that we have little to remark beyond what is expressed in our figure, which conveys a just idea of the plant. The leaves are glaucous, fleshy, very blunt, with a thin curled whitish edge. Before flowering they are so placed as to represent a small chalice, whence the name has been taken. The flowering stem appears to be glabrous, but the pedicels and the leaves of the calyx are sparingly covered with fine transparent glandular hairs. The flowers are bright yellow, with filiform petals, and a single row of stamens of the same colour as the petals, and about half their length.

Our drawing was taken from a plant in the Nursery of Mr. W. Ross, of Stoke Newington. It is half-hardy, requiring only a dry air, and protection from frost.

J. L.



SEMPERVIVUM glutinosum.

Clammy Houseleek.

DODECANDRIA DODECAGYNIA.

Nat. ord. SEMPERVIVÆ. *Jussieu gen.* 307.*SEMPERVIVUM.* *Suprà vol. 2. fol.* 99.

S. glutinosum, caule frutescente, foliis cuneiformibus viscidis ciliatis, ciliis cartilagineis appressis. *Hort. Kew.* 2. 147.

Sempervivum glutinosum. *Willd. sp. pl.* 2. 931. *Hort. Kew. ed. 2.* 3. 172. *Jacq. hort. schænb.* 4. 32. t. 464. *Curtis's magaz.* 1963. *Poiret suppl. encyc. de Latnarck.* 3. 176.

Caudex fruticosus, pollicem crassus, brevis, teres, erectus, glaber, radicans, undique emittens ramos ascendentes ceu totidem caules, à 3 ad 4 pedes altos, crassos, glutinosos, foliosos, débiles, supernè in paniculam abeuntes amplam laxamque ex pedunculis subdivisis et patentissimis. Fol. sparsa, cum parvo, obtuse cum parvo acumine, venis nervisque destituta, crassa, carnosa, virentia, ad oras cartilagineo-ciliata ciliis, subappressis. Cal. glutinosas, circitèr decemdentatus, viridis. Pet. 8-10, lanceolata, patentissima, flara. Germina totidem quot petala. Stam. petalis duplo plura. *Jacq. loc. cit.*

Native of the Island of Madeira, where it was observed by Mr. Masson, the king's late botanical collector, and introduced in 1777. Its blossom makes a lively appearance in the greenhouse, where it continues in beauty for two or three months together. The foliage is suffused with a transparent viscous confluent excretion, and looks as if newly varnished. Small insects are ensnared in this limy surface. The species was first represented by a figure in the *Hortus Schoenbrunnensis* of Jacquin, one of the most splendid works in this department of Natural History.

Stem shrubby, nearly an inch in diameter, smooth, short, putting out a greater or less number of weak thickly limed flower-stalks, from 2 to 4 feet in length, dividing upwards into alternate wideset leafy subdivided panicles, with loosely flowered spikelets. *Leaves* scattered, spreading, approaching each other in the form of an expanded rose at the top of the stem, cuneately oblong, bright, limy, 3 to 4 inches long, thick, fleshy, cartilaginously fringed at the edge with the fringe generally close-pressed, rounded at the top with a small point, gradually diminishing to small fleshy concave *bractes* as they ascend on the flower-stalk: *pedicles* not so long as the flower is wide. *Calyx* 9-10-cleft, green,

limy. *Petals* equal in number to the calycine segments and alternating with them, deep yellow, lanceolate, stellately expanded. Stamens doubling the number of the petals. *Germens* as many as petals, each with a small notched scalelike membranous gland at the base, the nectary of Linnæus.



NOTE.

In the English text of the article *ACROSTICHUM alciorne* (262, 263) in the third volume of this publication, we have explained erroneously the term *Gyratæ*, used by Dr. Swartz in his celebrated Synopsis as the denomination of one of his divisions of the Order *Filices*, by referring its meaning to the involution of the nascent fronds; while in truth it is intended by that ingenious author to designate a division of this natural family, the species of which are furnished with capsules that are encircled by an articulated ring or sphincter, by the curious elastic nitency of which these are enabled, when ripe, to evacuate and project their fine dustlike seeds. We are obliged to Mr. Brown for pointing out to us our blunder.



* SEMPERVIVUM úrbicum.

City Houseleek.

DODECANDRIA HEXAGYNIA.

Nat. Ord. CRASSULACEÆ De Cand. (Introduction to the Natural System of Botany, p. 161.)

SEMPERVIVUM.—*Supra, vol. 18, fol. 1563.*

§ 1. *Chronobium*, Propagines nullæ. Flores sæpius flavi, rariùs albi. —Species omnes Canarienses aut Maderienses D. C.

S. urbicum; caule fruticoso erecto apice folioso veteribus foliorum cicatris quadratis tessellato, foliis spathulatis glabris nitidis cartilagineo-ciliatis, basi tetragono-attenuatis apice rubo-marginatis. De Cand. Prodr. 3. 411.

S. urbicum. *Horn. suppl. p. 60. ex. D. C. Haworth in Phil. Mag. 1827 p. 125.*

Folia atroviridia, spathulata, obtusa; ciliis marginis rigidis cartilagineis. Paniculata spithamæa, densissima, pyramidalia. Flores glabri, aurei. Squamæ hypogynæ latæ, truncatæ, glabræ, levissimè emarginatæ.

A greenhouse plant, found commonly on rocks and the roofs of houses in Teneriffe, in inland parts of the Island, where the air is damper than in the valleys.

It was first met with by the late Dr. Christian Smith, who perished in the disastrous expedition under Captain Tuckey to the Congo. Latterly it has been found by Messrs Webb and Berthelot, in their examination of the flora of the Canaries. We obtained our specimen from Mr. Young, the skilful manager of the garden of the former of these Gentlemen, at Milford near Godalming. It flowers in the months of December, January, and February; and is one of the handsomest of the shrubby species of this genus. As Messrs Young and Penny of Milford have plants of this and other curious things from the Canary Islands for sale, the public will have no difficulty in procuring it from them.

* See folio 1553.



SEMPERVIVUM* villósum.,

Villous Houseleek.

DODECANDIPIA HEXAGYNIA. .

Nat. ord. CRASSULACEÆ De Cand. (*Introduction to the natural system of Botany*, p. 161.)

SEMPERVIVUM L.—Calyx 6-20-partitus. Petala 6-20, oblonga, acuta. Stamina petalorum numero duploa Squamæ ad basin carpellorum apice dentatæ aut laceræ. Carpella tot quot petala.—Herbæ nunc acaules, ex axillis propagines apice foliosas edentes, aut caulescentes propaginibus destitutæ; aut frutices carnosuli. Folia sapiùs revoluta. Cymæ rami nunc in corymbum, nunc in paniculam dispositi. Petala flava, albida, aut purpurascentia.—De Cand. prodr. 3. 411.

§ 1. *Chronobium*. Propagines nullæ. Flores sæpiùs flavi, rariùs albi.—Species omnes Canarienses aut Maderienses.—D. C.

S. *villosum*; caule frutescente suberecto tortuoso, foliis obovatis confertis subtùs gibbis villosis, squamis fimbriatis.—De Cand. l. c.

S. *villosum*. Haworth syn. 166. rev. 65.

Caulis fruticosus, carnosus, teres, subpubescens. Folia subtùs interruptè vittata, pilosa, ciliata; suprema magis distantia glabriora. Cymæ ramosæ, multifloræ, subracemosæ. Flores lutei. Petala 8-10. Squamæ cuneatæ, angulis rotundatis, glabræ.

A native of the mountainous parts of the Canary Islands, whence it was sent by Mr. Webb to his Garden at Milford, near Godalming. Our drawing was made from a flowering plant, about, 2 feet high, in May last. A Greenhouse plant, easily increased by cuttings.

If there be any permanence in characters derived from the nature of the hypogynous scales in this genus, this must be a different species from that to which we have referred it; for we find them wedge-shaped, and quite

* So called (ever-living), because of the power the species possess of flourishing in the most parched and barren places.

smooth, with 3 very imperfectly formed indentations, while they are described as being fringed in *S. villosum*.

This is a point we leave to be cleared up by Messrs. Webb and Berthelot in their forthcoming work on the Canaries.

J. L.



* STAPÉLIA Gussoneána.

Sicilian Stapelia.

PENTANDRIA DIGYNIA.

*Nat. ord. ASCLEPIADEÆ. (Introduction to the Natural System of Botany, p. 210.)**STAPELIA. Supra, vol. 9, fol. 755.*

-
- S. Gussoneana*; caulibus cinereo-glauciscrassis tetraquetris faciebus concavis, angulis dentatis inermibus, floribus fasciculatis parvis, corollis glabris.
S. Gussoneana. Jacquin.
-

One of the greatest geographical curiosities we know. The genus *Stapelia*, extensive as it is in species, does not possess one other which is not found in South Africa; so that this, which is a native of rocks on the sooth of Sicily, is cut off, as far as we know, from all the remainder of the genus, by the whole continent of Africa. Are we to infer from this that Central Africa contains *Stapelias* in its unknown Flora? or is this a northern fori, having no connection with the Hottentot races except in general structure? Perhaps we shall be justified in assuming the former to be the more probable theory, if we take into consideration that Forskahl found a plant without flower, which he took for a *Stapelia*, in Arabia; and that *Carallumas*, which are altogether *Stapelias* in habit; are found in Continental India.

The species was first made known by Baron von Jacquin at the meeting of Naturalists at Vienna in 1832, and we presume that he has since published it somewhere under the name he then gave it. Mr. Bentham brought it to England with him, and gave it to the Garden of the Horticultural Society, where our drawing was made last October.

* See folio 755.

Unfortunately we neglected to make any notes upon the structure of its flowers when they were before us, and we are therefore unable to describe them. When we shewed the plant to the late Mr. Haworth, he pronounced it to be entirely different from any which he had ever seen.



STAPELIA *hirsuta*; *var. atra*.*Dark-flowered hairy Stapelia.*

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. *Brown in Wern. trans.* 1. 12. *Sect. I.* Pollinis massæ cereacæ læves.

STAPELIA. Suprà fol. 755.

Sect. I. Corona exterior pentaphylla, foliolis indivisis. Brown.

S. hirsuta, corollis planis ciliatis, disco in facie hirsutis, cæterum glabris et transverse rugosis; rostris subulatis acutis, dorso per maximam longitudinem excurrentibus in alam latam acutam rostroque paulo brevior. *Jac. Stap. cult. t.* 15.—*var. atra ib. t.* 16.

Asclepias africana aizoides flore pulchro fimbriato. Comm. rar. 19. t. 19. *Bradl. succ. 3. 5. t.* 23.

S. hirsuta. Linn. syst. 260. *Mill. ic.* 172. *t.* 258. *Jacq. misc.* 1. 28. *t.* 3. *Thunb. prod.* 46. *Willd. sp. pl.* 1. 1278. *Ait. Kew.* 2.85. *Pers. syn.* 1. 278. *Haw. synops. succ.* 19. *suppl. pl. succ.* 9. *Röm. et Sch. sp. pl.* 6. 17. *Link en. ber.* 254.

As the STAPELIA, figured in our last article, is an example of Mr. Brown's second section of the family, and of Mr. Haworth's genus ORBEA; so is the present an illustration of the first section in the arrangement of the former gentleman, and of what is considered to constitute the true character of STAPELIA by Mr. Haworth.

The variety of *S. hirsuta*, which we have now before us, appears to be intermediate between that species and *S. sororia*; and to agree with the former in its essential characteristics, but to exhibit the colour of the flower of the latter species. It is stated by Messrs. Römer and Schultes, that it has been considered, by a writer in the Leipsic Diary for 1814, a distinct species. We were favoured with the specimen, from which our drawing was taken, from the collection of Mr. Hood, of Lambeth; but we had no opportunity at the time of describing it.

J.L.



STAPELIA normalis.

Regularly spotted Stapelia.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. *Brown in Wern. trans.* 1. 12. *Sect. I.* Pollinis massæ cereaceæ læves.

STAPELIA. *Corolla* rotata 5-fida carnosæ. *Col. fructif.* exserta. *Corona staminea* duplex, utraque in variis varia, interior quandoque obsoleta. *Antheræ* apice simplices. *Massæ pollinis* basi affixæ, altero margine cartilagineo-pellucidæ. *Stigma* muticum. *Folliculi* subcylindracei lævis. *Semina* comosa.

Plantæ carnosæ, *aphyllæ*, *angulatæ*, sæpe *tuberculato*. *Flores* ut plurimum *speciosi*, *odore* nauseoso *stercorario*. *Brown l. c.*

Sect. II. *Corona exterior* 5-partita, *laciniis bifidis*. *Brown.*

S. normalis, *corollis* 5-fidis 4-fidisve, *orbiculo spurio*, *rostris* alisque *teretibus*, *ligulis bifidis trifidisve*, *maculis corollæ normalibus*. *Jacq. stap. cult.* t. 41. *Rom. et Scult. sp. pl.* 6. 39. *Link enum. ber.* 1. 256.

Rami plurimi, *ramosi*, *declinati*, v. *ascendentes*, *virides*, a 4 ad 10 *uncias longi*, *adulti vix digitum minimum crassi*, *tetragoni*, *angulis dentatis*, *dentibus patentissimis*. *Pedunculi ex inferiore parte ramorum juniorum*, *plerumque ad divisiones*, *solitarii*, *uniflori*, *teretes*, *glabri*, *patientissimi*, *sesquiunciales*, *pennam columbinam crassi*. *Calycis folia ovata*, *acuta*, *glabra*, *pallide virentia*, *patientissima*. *Corolla fætida diametri biuncialis et ultra*, *subplana*, *patientissima*, $\frac{1}{2}$ *divisa*; *foris ex sulphureo pallens*, *lineata*, *glabra*, *intus tota flava*, *transversim striata*, *maculisque adpersa atrosanguineis*, *et per series longitudinales*, *parallelas*, *normaliter ordinatis*. *Tubus vix ullus*. *Lacinia* 4 v. 5, *ovata*, *acuta*, *planæ*. *Orbiculus spurius*, *tuberculatus*, *similiter coloratus*. *Nectarii saccus brevis*, *albidus*, *basi circulo*, *et supernè maculis* 2 v. 3 *sanguineis notatus*. *Rostra teretia*, *obtusa*, *erecta*, *supernè recurvata*, *virentia*, *sanguineo punctata*. *Ligulæ oblongæ*, *obtusæ*, *apice bifidæ*, *sæpe cum intermedio denticulo minimo*, *patientissimæ*, *viridulcæ*, *utrinque punctis atropurpureis adpersæ*, *ad basin sanguinæ*. *Folliculi glabri*, *digitum crassi*, *fere uncias 4 longi*, *erectiusculi*. *Jacq. l. c.*

This species is principally distinguished from *S. variegata* by the regular disposition of the spots upon the flower. The only figure of it which has been previously published is in the fine work of the younger Jacquin upon the cultivated species of *STAPELIA*. Our drawing was made at Mr. Colvill's Nursery.

The genus *Orbea* of Mr. Haworth, which is founded on the sectional characters of Mr. Brown, cited at the commencement of our article, does not appear to depend upon

distinctions of importance sufficient to constitute a particular genus. We have therefore continued to retain this species among the genuine STAPELIAS which have been divided into convenient sections by Mr. Brown. That gentleman, in remodelling the order of *Asclepiadeæ*, found it necessary to make no other alteration in the genus, as originally fixed, than to reform the essential character, which was defective and inaccurate; and to divide from it the species with a 10-cleft corolla (*HUERNIA Brown*), and those with a single corona to the corolla (*PIARANTHUS Brown*).

The singular appellation (*normalis*), which has been bestowed upon the species by Jacquin, alludes to the regular manner in which the spots of the corolla are arranged.

Branches many, much divided, bending down, or rising upwards, green, from 4 to 10 inches long, the old ones scarcely so thick as one's little finger, four-cornered; the angles with very spreading teeth. *Flower-stalks* from the lower part of the young branches, generally at their divisions, solitary, one-flowered, round, smooth, very much spreading, an inch and half long, as thick as a crow's quill. *Leaves of the Calyx* ovate, acute, smooth, pale green, very much spreading. *Corolla* stinking, its diameter two inches and more, nearly flat, very much spreading, divided half way ; on the outside of a pale sulphur colour, streaked in lines, smooth, in the inside with a yellow ground, striped across and marked with blood-red spots, which are regularly disposed in longitudinal parallel rows. *Tube* scarcely any. *Divisions of Corolla* 4 or 5, ovate, acute, flat. *Crown* spurious, warted, of the same colour as the divisions. *Sac* of the nectary short, nearly white, marked at the bottom with a blood-red ring, and at the top with two or three spots of a similar colour. *Horns* round, obtuse, erect, at the top curved backwards, green, dotted with blood-red. *Straps* oblong, blunt, split at the end, often having a little toothlet between them, very much spreading, greenish, covered on both sides with dark purple spots, at the bottom blood-red. *Seed-pods* smooth, as thick as one's finger, about four inches long, and nearly erect. *Jacq.*

J. L.



TESTUDINARIA elephantipes.

Hottentot's Bread.

DIÆCIA HEXANDRIA.

Nat. ord. DIOSCOREÆ.

TESTUDINARIA Salisb.—*Perianthium* 6-partitum, patens: laciniis linearibus subæqualibus. ♂. *Stamina* 6, basi laciniarum inserta. ♀. *Styli* 3-coaliti. *Capsula* membranacea. *Semina* alata.— *Herbæ ramis annuis volubilibus, caudice maximo rimoso*. Flores masculi *racemosi multiflori, feminei subsolitarii*.

T. elephantipes; foliis reniformibus planis apiculatis utrinque concoloribus. *Tamus elephantipes*. Ait. *Kew. ed. 1^a.—ed. 2^a. 5.386. Willd. sp. pl. 4.772.*

Bot. Mag. 1347, ♀. Pers. syn. 2.618. Link. enum. 2.426.

Testudinaria elephantipes. Burchell's travels, 2.147.

Omni parte glaberrima. Caudex maximus, subrotundus, suberosus, cortice undique alto rimosâ. Rami volubiles graciles. Folia alterna, petiolata, cordata, reniformia, acuminata, apiculata, 7-nervia, avenia, utrinque pallide virentia, lucida. Flores dioici, odore debili, ingrato, primum albi, post anthesin lutescentes. ♂. Racemi erecti, nunc axillares, nunc, ad nodos, oppositifolii, multiflori, internodiis longiores, minutissime puberuli. Pedicelli basi et apice bracteati, bracteis ovatis minutis persistentibus. Perianthium erectum, campanulatum, carnosum, limbo sexpartito reflexo: laciniis exterioribus linearibus acutis, interioribus lineari-spatulatis retusis. Stamina 6, ad basin laciniarum inserta; filamentis a latâ basi subulatis; antheris anticis, subrotundis, bilocularibus, adnatis; loculis septo incompleto longitudinaliter divis. Pollen parvum oblongum. Rudimentum styli trilobum.

This very remarkable plant was first introduced by the late Mr. Masson, who found it growing wild at the Cape of Good Hope. The plants which he sent to Kew having been males, the genus could not be ascertained satisfactorily; but from the resemblance of the male flowers to those of *Tamus*, it was referred to that genus till the females should be discovered. Afterwards when that sex was produced upon a plant which flowered at Mr. Joseph Knight's Nursery, the structure of the ovarium was considered to be the same as that of *Tamus*, and accordingly we find the female figured in the Botanical Magazine

without remark to the contrary. But Mr. Burchell having discovered it in abundance near Graafrennet bearing fruit, which he describes as a membranous capsule, a new genus has been constituted, and named in allusion to the resemblance the caudex bears to a tortoise. To this genus, which is more nearly related to *Dioscorea* than to *Tamus*, a second species has been added by Mr. Burchell, with the following name and character:—

Testudinaria montana; foliis cordatis semicollapsis latioribus, quam longis obsoletè nervosis subtùs glaucis.

A hardy greenhouse plant, pushing out its annual twining stems to the length of 8 or 10 feet, and flowering from July to November. The old stems, which are occasionally brought from the Cape, and in the grotesque figure of which the principal interest about the plant consists, are easily cultivated in any common greenhouse; but no means of artificially propagating it has yet been discovered. Mr. Burchell speaks of it in the following manner:—

“These mountains are the native soil of an extraordinary plant called *Hottentot’s Brood* (Hottentot’s Bread). Its bulb stands entirely above ground, and grows to an enormous size, frequently 3 feet in height and diameter. It is closely studded with angular ligneous protuberances, which give it some resemblance to the shell of a tortoise. The inside is a fleshy substance, which may be compared to a turnip, both in consistence and colour. From the top of this bulb arise several annual stems, the branches of which have a disposition to twine round any shrub within reach. The Hottentots informed me, that in former times they ate this inner substance, which is considered not unwholesome when cut in pieces and baked in the embers. It will easily be believed, that this food may not be very unlike the yam of the East Indies, since the plant belongs, if not to the same, at least to a very closely allied genus, as the membranaceous capsules, with which it was at this time covered, clearly proved.”

J. L.

1157.



J. M. W. Turner

Painted by J. M. W. Turner, 1828.

1157.

TILLANDSIA* acāulis.

Stemless Tillandsia.

 HEXANDRIA MONOGYNIA.
Nat. ord. BROMELIACEÆ.*TILLANDSIA. Suprà, vol. 2. fol. 105.*

T. acaulis; foliis oblongo-lanceolatis acuminatis undulatis recurvis, floribus aggregatis sessilibus.

Subacaulis *cæspites latos prolferos efformans*. Folia *oblongo-lanceolata, acuminata, undulata, cæsia, lepidota, serrulata, utrinque concolora*. Flores *albi, in capitulo sessili aggregati, bracteis membranaceis, venosis, apice serrulatis intermixtis*.

A pretty little epiphyte, native of Rio Janeiro, for which we are indebted to Mrs. Arnold Harrison, who obligingly communicated it in August 1827.

It never grows more than 3 or 4 inches high, producing suckers freely, by which it is easily increased. If suffered to grow without these being removed, it soon forms broad patches hanging over the sides of the pot. Its leaves are a dull sea-green; its flowers white, in a sessile cluster in the bosom of the leaves; they appear at uncertain seasons, chiefly in March, April, and August.

Requires the heat of the stove, and a light, sandy, poor soil.

J.L.

* *Tillandsia* was so named after Elias Tillands, born in 1640, died in 1692, who was the Keeper of the Botanic Garden at Abo. He paid much attention to the Botany of Finland; and between 1681 and 1688 published a catalogue of the plants of the country, written in Latin, Swedish, and Finish, with wood-cuts.



TILLANDSIA flexuosa; γ . pallida.*Flexuose Tillandsia; pale-flowered variety.*

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIÆ. *Sect. I.* Germen superum. *Juss. gen.* 50.*TILLANDSIA. Suprà vol. 2. fol.* 105.

T. flexuosa spicis laxis flexuosis, floribus distichis remotiusculis, foliis lanceolato-linearibus reclinatis, caule apice subdiviso. *Swartz prod.* 57. *fl. ind. occ.* 1. 590. *Willd. sp. pl.* 2. 12. *Ait. Kew. ed.* 2^a. 2. 203. *Pers. syn.* 1. 345.

β . *fasciata*; foliis fasciatis.

T. tenuifolia, foliis lineari subulatis integerrimis imbricatis, spica simplici laxa. *Jacq. amer.* 92. t. 63.

γ . *pallida*, floribus pallidis, spica sub simplici.

Parasitica. Radices filiformes, longi, rigidi. Folia plerumque radicalia, lanceolato-linearia, basi latiora, sessilia, ventricosa, amplexentia, margine integra, laxa, apice reclinata, striata, membranacea, subtus viridialbida, subtomentosa, v. farinosa, ex squamis minutissimis peltatis medio excavatis margine hyalino striato cinctis, oculo armato distinguendis. Caulis v. Scapus foliis longior, 2-3 pedalis, laxis, teres, vaginatus, vaginis alternis, lanceolatis, acutis, rubris, inferioribus in foliola linearia desinentibus: apice subdivisus, spicis terminatus. Spicæ 2 v. 3, solitariae, longæ, laxæ, rachibus triquetris, flexuosis, flosculis alterni, distichis, remotiusculis. Bracteæ v. Spathæ 1-phyllæ, lanceolatae, concavae, striatae, cinctæ. Calyx 3-partitus, basi trigonus, persistens, laciniis erectis, coloratis. Petala 3, linearia, calyce longiora, apice reflexa, coccinea, v. cærulea. Filamenta 6, alterna parum breviora, receptaculo inserta, filiformia, longitudine ferè petalorum. Antheræ ovatae, basi bifida, albidæ. Germen ovatum, trigonum. Stylus filiformis. Stigma 3-fidum. Capsula elongata, cylindracea, acuminata, trigona, 3-carinata, 3-locularis, 3-valvis, intus nitida, nigra. Semina papposa. Pappus capillaris, lutescens. *Swartz* 1. c.

We have placed this TILLANDSIA provisionally only as a variety of *flexuosa*, because, although it is probable that it may be a distinct species, we, not having seen while in flower the plant from which our drawing was made, are not prepared to point out its distinguishing characters. *T. flexuosa* must either be a very variable plant, or more species than one are already included in it by those who have described the wild subject; to say nothing of Jacquin's *T. tenuifolia*, which is referred hither by Swartz and other botanists. The last-mentioned writer says, the Jamaica plant varies with scarlet and blue flowers! Jacquin's plant has leaves banded like those of some species of

Aloe; and the subject of this article had pale green flowers with little colouring, either of scarlet or blue, in bracteæ, calyx, or corolla. In foliage and *form* of parts it resembles perfectly the wild specimens of *T. flexuosa* preserved in the Banksian Herbarium.

Our drawing was made from Mr. Colvill's collection. Native of the West Indies and South America.

Parasitical. *Roots* filiform, long, rigid. *Leaves* chiefly radical, linear-lanceolate, broader at the base, sessile, inflated, embracing, entire at the edge, loose, bent back at the point, striated, membranous, greenish white beneath, somewhat tomentose or mealy, with very minute peltate hollowed scales which are surrounded with a striated hyaline edge and may be distinctly seen with a lens. *Stem* or *Scape* longer than the leaves, two or three feet high, feeble, round, with alternate, lanceolate, acute, red edges, the lowermost ending in a linear leaflet; somewhat divided at the top, and terminated by the spikes. *Spikes* 2 or 3, solitary, long, feeble, with a three-cornered flexuose rachis; the florets alternate, distichous, and remote. *Bracteæ* or *Spathæ* of one leaf, lanceolate, concave, striate. *Calyx* 3-parted, triangular at the base, persistent, with erect coloured laciniaë. *Petals* 3, linear, longer than the calyx, reflexed at the point, scarlet, or blue (or pale green). *Filaments* 6, the alternate ones a little shorter than the others, inserted into the receptacle, filiform, nearly the length of the petals. *Anthers* ovate, bifid at the base, whitish. *Ger-men* ovate, triangular. *Style* filiform. *Stigma* trifid. *Capsule* elongate, cylindrical, drawn off to a point, 3-cornered, with each angle a little dilated, 3-celled, 3-valved, inside shining black. *Seeds* pappose. *Pappus* capillary, yellowish. *Swartz.*

J. L.



TILLANDSIA* rósea.

Pink-headed Tillandsia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ Jussieu. (Lindley's introduction to the natural system of botany, p. 256.)

TILLANDSIA.—*Suprà, vol. 2. fol. 1105.*

T. ; foliis ligulatis acuminatis furfuraceis patentibus, spicâ ovatâ solitariâ foliis vix longiore, bracteis ovatis concavis. !

Our drawing of this undescribed species of *Tillandsia* was made some years since, from a plant in the possession of the Marchioness of Bath. It flowered in the month of May, but having afforded only a single specimen, we had not an opportunity of examining it in detail. It is, however, distinguished sufficiently by its ovate head of flowers scarcely higher than the leaves, and bright pink bractææ.

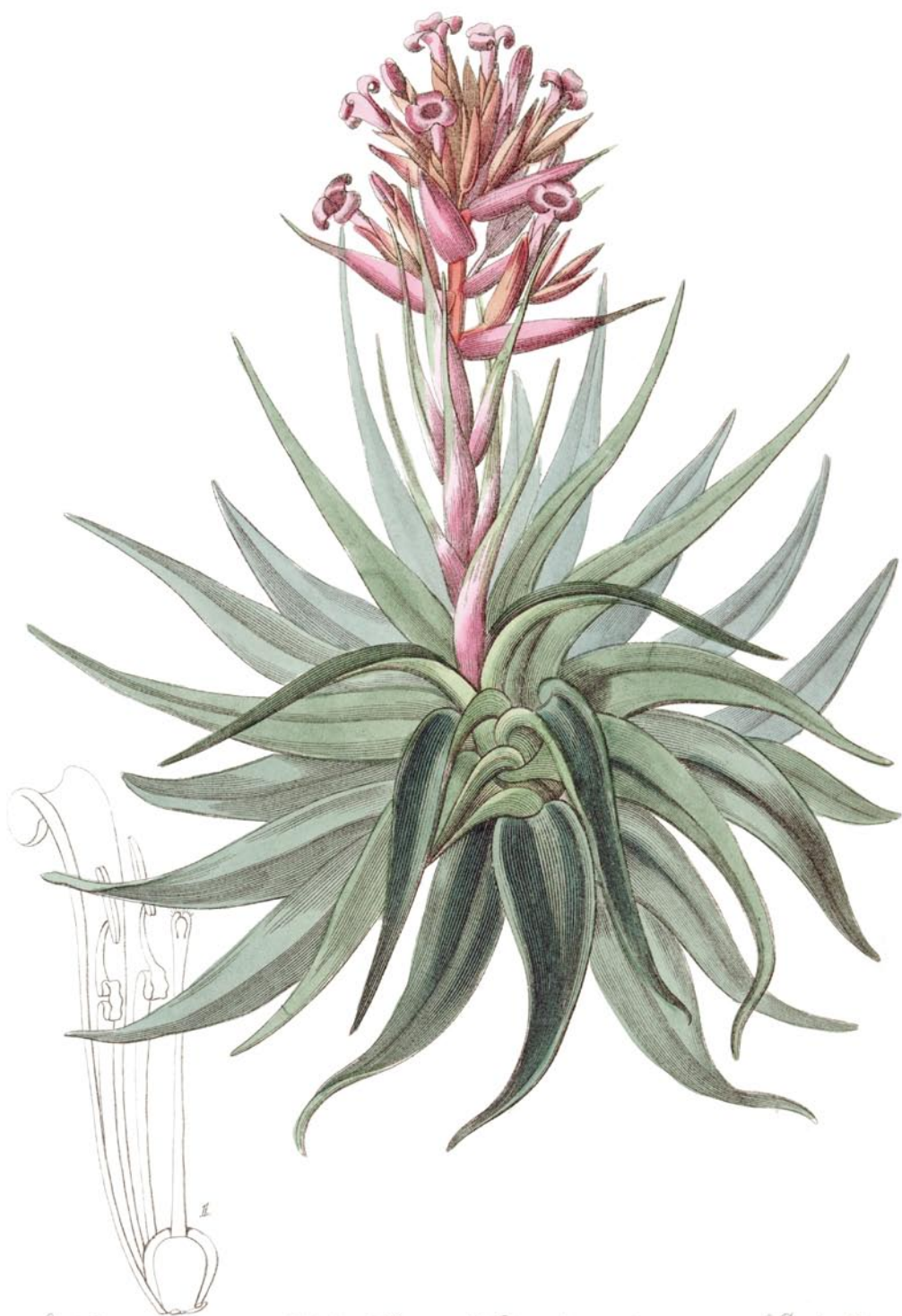
A native of Brazil.

In the second edition of Sweet's *Hortus Britannicus*, which is just published, we find the names of five *Tillandsias*, with which we are unacquainted; but this can scarcely be one of them, as they are all stated to be natives of the West Indies, and none of the names are applicable to the species now represented. In the last Number of this publication we observed, in speaking of Mr. Loudon's *Hortus Britannicus*, that whatever inconvenience the public might experience from the Linnean arrangement of that work, would be remedied by consulting Mr. Sweet's Catalogue, which is arranged upon the Natural System. At that time we were not aware that the new Catalogue, by the same author, to which we have just referred, was upon the eve

* *Suprà, vol. 14, fol. 1157.*

of publication. We have since examined it, and find it a decided improvement upon the first edition; the paper and printing are better, the colour of the flowers and many useful signs indicating general characters of growth have been added throughout; it contains nearly two hundred pages more than before; and, as far as we can ascertain, by taking an average of the pages, it comprehends about 34,000 species and varieties.

J.L.



Miss Drake del

Printed by J. Ridgway 169 Piccadilly 4mo 1842

J. K. P. del

TILLĀNDSIĂ rūbīdă.

Madder-coloured Tillandsia.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

TILLANDSIA. *Botanical Register*, vol. 2. fol. 105.

T. rubida; undique lepidota, foliis ovato-lanceolatis canaliculatis acuminatis exterioribus recurvo-patentibus, scapi vaginia acuminatis erectis, spicâ oblongâ subcompositâ, bracteis lanceolatis mucronatis calycibus paulò longioribus petalis brevioribus, sepalis petalis brevioribus, filamentis versus apicem sigmoideis, ovario obovato.

A dry-stove epiphyte, imported from Brazil by Messrs. Loddiges, with whom it flowered in February last. It is a very pretty plant, gay with madder-coloured flowers for many weeks.

It is nearly related to *T. stricta*, already figured at fol. 1388 of this work, but its bracts are scurfy, not smooth, and are terminated by a long stiff point; the flowers are red not violet-coloured, and much longer than any of the bracts except the lowermost. It is also not improbable that in *T. rubida* the spike may become very decidedly branched, of which there are plain indications in the specimen figured; in *T. stricta* there is no tendency whatever to branch.

It will grow well if placed in a basket, and hung from the rafters of the stove. The back or end-wall of a pine stove would suit it very well, and the general treatment should be the same as is applied to those plants.

It is to be suspected that this and other species may lurk in herbaria under the name of *T. stricta*; of one instance at least we have evidence in the case of the plant distributed by Professor Gardner under the number 134, and since published by him as *T. stricta* in the *London Journal of Botany*.

November, 1842.

2 A

That plant is much larger than the genuine species, has the leaves ending in a fine thread, covered all over with a coarse shagginess which breaks up into a kind of chaffy fringe at the edges; the bracts are protected in the same manner, and with the flowers form a hemispherical head quite overtopped by the slender points of the leaves. To this the name of *T. Gardneri* may be applied, with the following diagnosis.

- T. *Gardneri*; undique ramentaceo-lepidota, foliis lanceolatis in acumen filiforme productis exterioribus patentibus interioribus spicâ longioribus, scapi vaginis filiformi-acuminatis erectis, spicâ simplici hemisphæricâ, bracteis oblongis superioribus obtusis calycibusque mollibus æquilongis.



TILLĀ[˘]DSIA* strī[˘]cta.*Erect Tillandsia.*

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.*TILLANDSIA.*—*Suprà*, vol. 2. fol. 105.

T. stricta; foliis canaliculato-subulatis pruinoso-canescens, spicâ multiflora terminali. *Spreng. syst.* 2. 24.

T. stricta. *Bot. mag.* 1529.

Folia recurva, pruinoso-lepidota, lanceolata, acuminata, convoluta, scapo longiora. Scapus strictus, minus lepidotus. Flores amænè et intensè cærulei, bracteis magnis, ventricosis, oblongis, acutis; inferioribus cuspidatis. Petala apice ovata, acuta, patentia, bracteis equalia.

Native of Buenos Ayres and Brazil; from the former of which countries it was received by Peter Kendall, Esq., a zealous cultivator of curious hothouse plants, who presented it to the Horticultural Society. Our drawing was made in the Chiswick Garden in March last.

This is among the most beautiful of its tribe, and one that is very easily cultivated. Mr. Kendall finds it succeed remarkably well with the following treatment. In June he takes it out of the stove, and suspends it from a wall in the open air, where he leaves it without water, attention, or protection, till the succeeding October; thus creating a sort of artificial winter. When the time for placing it again in the stove arrives, it is found withered, discoloured, and in appearance half dead: as soon, however, as it is again submitted to heat and moisture, it recovers rapidly, commences a new and vigorous growth, and in the course of a few weeks loses all trace of its previous sufferings, as-

* *Suprà*, vol. 14. fol. 1157.

suming a rich healthy vegetation. After throwing out suckers from each side, it shoots up its spikes of bright blue flowers, which begin to open in March, and endure till the end of April: when the period for a cessation of growth draws near, its parts harden, its flowers fall away, and by June it is ready again to undergo the same treatment as before.

It is no doubt desirable to create an artificial winter or cold season for all tropical plants, if it be possible; but this is generally impracticable; and, although Mr. Kendall's management succeeds with this, and two or three similar plants from the same part of the southern hemisphere, it by no means follows that it can be applied generally; on the contrary, we know from experience that Brazilian and West Indian epiphytes of the Orchis tribe are destroyed by it.

Leaves recurved, covered with a kind of frost-like scale, lanceolate, acuminate, convolute, longer than the scape. *Scape* erect, less scaly. *Flowers* bright deep blue, with large, ventricose, oblong, acute bractæ, of which the lower- most are cuspidate. *Petals* ovate, acute, and spreading at the end, as long as the bractæ.

J. L.



TILLANDSIA xiphioides.

Buenos Ayres Tillandsia or Air-plant.

HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIÆ. *Jussieu gen.* 49.*Div. I.* Germen superum.

TILLANDSIA. *Cal.* 3-partitus. *Cor.* longior, tripartita aut tubuloso-trifida. *Stam.* imâ corollâ inserta. *Caps.* obtusè 3-gona, 3-loc. polysperma, *seminibus* papposis. *Folia* vaginantia, *plerumque* radicalia; *flores* in scapo aut caule spicati aut paniculati, singuli *spathacei*. *Plantæ herbaceæ plurimæ parasiticæ, aliæ* Agavem, *aliæ* Bromeliam, *aliæ* Aloëm habitu mentientes. *Id. loc. cit.* 50.

T. xiphioides, corolla tubuloso-trifida, limbi tripetaloidis laciniis reflexo-obliquatis duplo brevioribus tubo gracili subincluso spathâ.

Folia radicalia, pauca, plurifaria, patentia, ligulato-attenuata, basi semunciam v. circâ lata, subtriuncialia, canaliculato-carinata. Culmus sub5-uncialis, strictus, totus vaginatus, teres crassitudine pennæ scriptoriæ, impressus internodiis utrinque sulco lato rotundo pro flore (v. ramo) nobiscum abortiente ad geniculos utrinque sito ab intra vaginam emittendo, terminatus spathâ bivalvi 1-florâ erectâ; folia culmi cuncta spathacea, disticha, alterna, internodiis longiora, subfuscescentia, striatula, glabra. Spatha foliis conclusa, 2 uncias cum dimidio longa, viridissima, æqualis, valvis involuto-conniventibus lanceolatis, posticè impressis cavo laterum culmi simili. Flos sessilis, erectus, fragrans, albus. *Cal. inclusus, herbaceus, rigens, sesquiuncialis, foliolis lineari-attenuatis, tubum corollaceum involventibus.* *Cor.* 4-uncialis v. parùm infrâ; tubus lineari-elongatus, rotundato-trigonus, subinclusus, crassitudinæ ferè pennæ corvinæ; limbus exsertus, tripetalo-partitus, totus reftexus, laciniis obovato-oblongis, obliquatis, apice rotundatis, crenulato-erosis. *Stam.* breviter exserta tubo; fil. phylracea, latitudine diametri capilli, basi dilatata; anth. luteae, sagittato-lineares, imo limbo recumbentes: pollen granulato-grumosum. *Germ.* triquetro-pyramidatum, 3-loc.; loc. unoquoque ovulis numerosis repleto: stylus continuus, longè exsuperans stamina; stigma subclavato-continuum, hinc canaliculatum, resinâ fusca induratâ obductum, atque filiferum, educens filis plures arachnoideos elasticos tenaces ad antheras usque laxandos gyrafim.

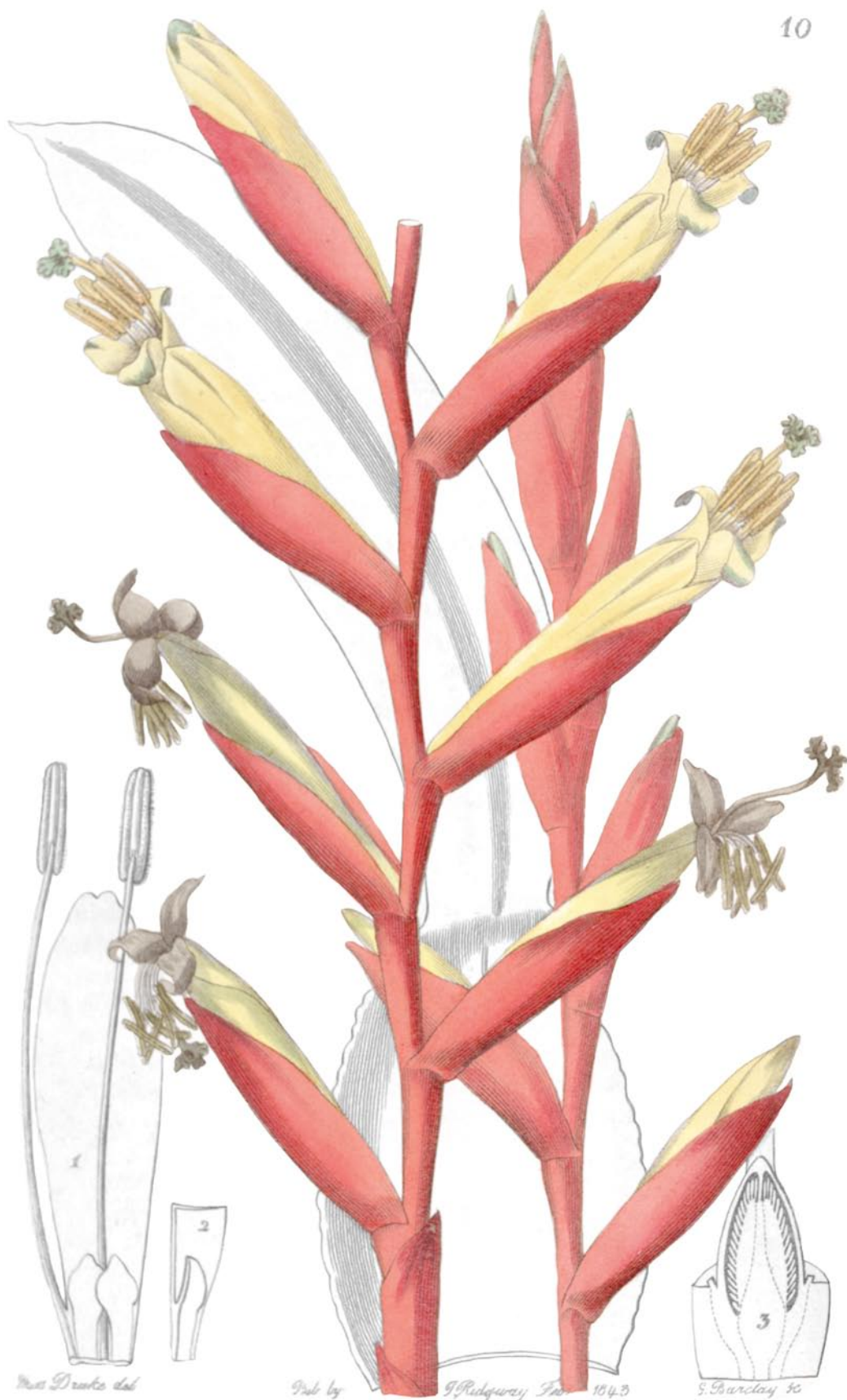
A genus belonging to the small order of *Bromeliæ*, or Pine-Apple tribe; and differing from *PITCAIRNIA*, in having a completely superior germen. Its numerous species are parasitic, growing upon the bare trunks and branches of trees, sometimes on the naked face of rocks. A fact which may serve to diminish the wonder of their vegetating for years when suspended elsewhere by a thread, and which has procured them the name of Air-plants, also applied to some Orchideous vegetables gifted with the same property.

Of the present singular species we have found no account. Its inflorescence, in this instance, consisted of a single sessile upright highly fragrant white *flower*, little less, when fully extended, than four inches long, issuing from a bivalved *spathe* wrapped round by the upper leaves of the short stem; at the two upper joints of which, in hollows on each side within the surrounding sheath, we perceived the rudiment of either a flower or branch. *Calyx* herbaceous, enclosed, an inch and half high; tube of the *corolla* slender, higher than the spathe; *limb* tripetaloid, segments obliquely reflectent, obovate-oblong, twice shorter than the tube, unevenly crenulated. But the strangest anomaly presents itself in the *stigma*, which is clavately elongated, channelled on one side, and coated by a brown hard substance like resin, from some small points in which issue several fine elastic tough threads, floating down in ringlets among the *anthers* that lie without the mouth of the tube below, and in which the *pollen* appeared to be moist, and grumously granulate. To such stigma we know of nothing analogous among vegetables. Have we been imposed upon by some extraneous substance or some casual excretion? We state the appearance with diffidence, even after the most scrupulous inspection, and shall scarcely feel secure till we meet the like in another sample.

Native of Buenos Ayres. Flowered in one of the hothouses at Castle-Hill, the seat of Lord Fortescue, in Devonshire; from whence the specimen was received by Mr. Edwards in March last. The lower foliage was copied from an uncoloured drawing made by Lord Fortescue, who had the goodness to communicate it to Mr. Edwards for that purpose; the stem and flower having been sent up by the gardener without the root-leaves. Its only culture for five years past had been, in being suspended by a string in the hothouse.



a The bivalved spathe. *b* The 3-parted calyx. *c* The tube of the corolla and one segment of the limb. *d* A stamen. *e* The pistil,



* VRIESĬA psittacĭna.

Parrot-flowered Vriesia.

 HEXANDRIA MONOGYNIA.

Nat. ord. BROMELIACEÆ.

VRIESIA. Sepala 3, convoluta, æqualia, petalis spice revolutis breviora. Squamæ cuique petalo 2, semiadnatæ, indivisæ. Semina exserta; 3 libera petalorum basi inserta, 3 inter petala inserta iisque basi connata; antheræ lineares, planæ, posticæ. *Ovarium* semi-inferum. conicum; stigma trilobum, lobis convolutis et sinuatis villosis. — *Folia plana erecta*. Flores *distichi, distantes, bracteis magnis, canaliculatis. coloratis.*

Vriesia psittacina; foliis oblongis acutis basi dilatatis, sepalis corollâ parùm brevioribus, staminibus exsertis.
Tillandsia psittacina. Hooker in Bot. Mag. t. 2841.

Although the limits of the genera of the Bromeliaceous order are much better defined than they were a few years ago, there are no doubt some distinct groups still concealed among the little known species crowded together under the name of *Tillandsia*. The present instance we conceive to be one of them.

Although referred to *Tillandsia* this has neither a superior ovary, nor the scaleless petals that are essential to that genus. On the contrary, it evidently belongs to Endlicher's second section of the order, at present consisting of *Pitcairnia* and *Brocchinia* only. From the latter it differs in its resolute scaled petals. and distinct filaments; from the latter in its distinct sepals, and regular revolute petals. From both its large channelled coloured bracts distinguish it at first sight.

Along with it will have to be placed the *Tillandsia heli-*

* We have taken the opportunity of tints commemorating the merits of Dr. W. de Vriese. Professor of Botany at Aiuitcrdarn, all excellent Botanist and Physiologist.

conioides of Kunth, a plant with the same peculiar habit and as it appears from the description given of it by that author, the same peculiarities of structure; but differing in its leaves being narrower, awl-shaped at the point, the bracts flesh-coloured, and the flowers white, or nearly so.

This is an extremely pretty stove plant, for which we are indebted to C. B. Warner, Esq. It is said by Sir W. Hooker to be a native of the neighbourhood of Rio Janeiro.

Fig. 1. represents a petal, with the two scales at its base; and it also shews how one of the stamens is inserted into the very base of the petal, between the scales, while the petals themselves are united by the stamens that are intermediate to them. Fig. 2. shews a section of one of the scales, and indicates that they are adherent to the petals for more than half their length. Fig. 3. is a section of the ovary.

In cultivation this requires to be potted in leaf mould, with a quantity of potsherds for drainage. Plenty of water should be given during the summer months, but sparingly in winter. Or it may be grown suspended in a wire basket, like an Orchidaceous plant. It is propagated by suckers.



Miss Drake del.

Pub. by J. Ridgway 169 Piccadilly Sept. 1. 1895.

S. Watts sc.

* YUCCA Draconis.

Dragon-tree-leaved Adam's Needle.

 HEXANDIA MONOGYNIA.

Nat. ord. LILIACEÆ.

YUCCA.—*Sauprà*, vol. 20. fol. 1690.

-
- Y. Draconis*; arborescens, foliis laxè capitatisubreflexis ensiformibus acuminatis margine scabris, paniculis ramosis perianthiis patentissimis.
Y. Draconis. *Haworth*, *Suppl.* p. 33. *Römer & Schult. Syst. veg.* 7. 716.
Elliott Fl. South Carol. 1. 401.
-

What may be species and what varieties in this noble genus, it is in the present state of botanical information impossible to say; there is however but little doubt that the two plants which form the subject of this and the succeeding plate are really distinct.

This, which I presume is the *Y. Draconis* of Haworth and Elliott at least, whatever it may be of others, is one of the most stately of the genus; it grows along the sea-shore of Carolina, frequently intermixed with *Yucca gloriosa*, and flowers from May to August; it sometimes grows as much as 9 or 10 feet high. The great peculiarity by which it appears to be distinguished is the spreading flowers, whose segments, instead of remaining closed in a globose manner as in most others, expand till they diverge from the flowerstalk at nearly a right angle.

The drawing was made in the garden of the Horticultural Society, in July, 1835; and about the same time I received it from the Nursery of the Messrs. Backhoo of York, with whom it had been growing in the open ground

for some years. Mr. William Wood, who has the charge of the plant department in this extensive establishment, informs me that the main stem, clear of the leaves, was two feet long, and terminated in three clusters of leaves, from the centre of each of which rose a flower stem three feet high. The foliage, notwithstanding its stiffness, does not offend the eye, for the leaves gradually turn back as they grow old, till at last they form the graceful arrangement shewn in the accompanying figure.

Nothing can be better adapted than these plants for ornamenting either artificial or natural masses of rock-work, precipitous banks, or other situations where the singular stems can be so much above the eye, as to form a bold and prominent object standing out in strong relief against the sky. They are hardy, perennial, and easily procured in the Nurseries. The Messrs. Backhouse find this, *Y. rufo-cincta*, *recurvifolia*, *glaucescens*, *filamentosa*, and others, quite capable of bearing the winter, even so far north as York. In the Garden of the Horticultural Society no weather seems to harm them.

1895.



Miss Drake, del.

Pub. by J. Ridgway 169 Piccadilly Sept. 1. 1896.

J. Watts, sc.

* YUCCA flaccida.

Weak-leaved Adam's Needle.

 HEXANDRIA MONOGYNIA.

Nat. ord. LILIACEÆ.

YUCCA.—*Suprà*, vol. 20. fol. 1690.

Y. flaccida; foliis omnibus valdè flaccidis tenuibus Infra medium debiliter recurvo-dependentibus loratim longo-lanceolatis planis apice concavis mucronulatis undique asperiusculis, filis marginalibus valdissimis fulvicantibus. *Haworth, Suppl. p. 35. Römer et Schultes Syst. Veg. 7. 739.*

Acaulis, cæspitosa, foliis flaccidè recurvis, striatis, striarum jugis interupte elevatis et hinc superficiem scabram reddentibus. Paniculæ multiflora, patentes, glaberrimæ. Flores ochroleuci rubore vix ullo nisi ipsis apicibus sepalorum, subglobosi. Petala sepalis duplò latiora. Filamentosa pruinoso-pubescentia, stylo breviorra.

Of this the native country is unknown. It was first noticed in the Garden of Mr. Vere, of Kensington Gore, where it had probably been raised from North America seed. It is a pretty and apparently distinct species, well marked by its thread-edged scabrous leaves, pallid flowers, and stemless habit.

The drawing was made in July, 1836, in the Garden of the horticultural Society, where the plant is a hardy evergreen perennial; its flowers are over by the middle of August. It is readily multiplied by offsets, and like the rest of the genus thrives most in sandy soil, resernbling that of the sea-shore, along which so many of the species are found wild in North America.

These Yuccas would surely be excellent plants for gardens on the sea-coast, and yet one never sees them there.



* YÚCCA supérba.

Superb Adam's Needle.

 HEXANDRIA MONOGYNIA.

Nat. ord. LILIACEÆ. Juss. (Introduction to the Natural System of Botany, p. 279.)

YUCCA.—*Corolla* hexapetalo-partita, capamnulata, demum marcescens; laciniis æqualibus parum patentibus, ungue connatis. *Stamina* valida, brevica; filamentis basi corollæ insertis, superne tumidulis. *Antheræ* parvæ, suboblongæ. v. subglobosæ. *Germ.* oblongum, teretiusculum, 6-sulcum, stamina excedens. *Stigmata* 3, sessilia, obesa, deorsum confluentia, spice parum recurvata. *Caps.* carnosa, oblonga, obtuse 3-6-gona, apice perforata et demum dehiscens, 3-6-locularis, dissepimentis 3 crassioribus. *Semina* numerosissima, uniserialia, plana. *Römer and Schultes Syst. veg. v. 7, xli.*

Y. superba; foliis loratim lanceolatis amplis 2-3 uncias latis subplicate parum mucronatis, floribus confertissimis oblongo-campanulatis, inapertis spice assurgenter rostratim curvantibus, caudice decempedali. *Haworth Suppl. Succ. Pl. p. 36.*—*Römer and Schultes Syst. veg. vol. 7, p. 720.*
Y. gloriosa. Bot. Rep. t. 473.

We are indebted to the Honourable and Rev. William Herbert, for the specimen from which our drawing was made. Having no knowledge of the plant ourselves, we can only repeat the observations made by Mr. Haworth, when he first pointed out the species, with the addition of Mr. Herbert's remarks in the letter that accompanied the specimens.

"This conspicuous species," says Mr. Haworth, "has been taken, by the authors of the Botanical Magazine, for *Yucca alpoifolia*; and, misled by relying too much on their decision, I have cited its beautiful figure in the Botanical Repository, for *Y. aloifolia*. But on more mature consideration, nothing can appear more distinct in the whole genus than those two plants. The leaves of the present species are en-

* *Yuca* is said to be the name of this genus among the natives of Saint Domingo.

tire, and smooth-margined, not serrulated, and three times broader than those of *aloifolia*; and they possess much weaker and less pungent points. Indeed, as a species, it is much nearer allied to *Y. gloriosa*; and, in fact, appears to differ from that species only in the shape of its corolla, and in its arborescent stem, which differences are, however, sufficient.”—(*Suppl. Succ. p.* 36.)

Mr. Herbert tells us that he bought the *Yucca*, twenty years ago, from Mr. William Malcolm, of Kensington; and that it is unquestionably the most magnificent plant in the flower-garden. The flower-stem rises eight or nine feet high, and the profusion of blossom is so great, that as the lateral shoots are rather suberect than diverging, a pin cannot be passed between the flowers in the centre of the column. The deep crimson of the stalks and stem, and the purple stripe on the outer petals of the flower, remind one of the colour of *crinum amabile*, and contrast beautifully with the glossy white flowers. It is a very hardy species, and flowers frequently. In a very dry season the colour is not so deep; warm or temperate, and showery weather, bring it to the highest perfection of beauty. Its leaves are more acutely pointed than those of *Yucca gloriosa*.

141. AGĀVĚ saponāřř.

A. saponaria; acaulis, inermis, glaucescens, rhizomate crasso carnosum, foliis teneris lanceolatis acuminatis semiamplexicaulibus, spicā simplici capitatā, bracteis acuminatis ovario brevioribus.

Rhizoma ? crassum carnosum. *Truncus* nullus. *Folia* tenera, glaucescentia, inermia, lanceolata, subpedalia, apice convoluta, margine cartilagineo-serrulata, basi semiamplexicaulia sed angustata. *Scapus* 2-3 pedes altus, teres distanter foliatus; foliis superioribus marcescentibus, acuminatis, sensim in bracteis ovario brevioribus mutatis. *Spica* capitata, simplex, 10-12-flora. *Flores* luridi, odorem debilem spirantes, subringentes ob dorsi sui contra flores superiores pressuram, semisexpartiti; *laciniis* equalibus, lineari-oblongis, apice concavis; *tubo* paululūm curvo. *Stamina* 6, æqualia, medio tubi inserta; *filamentis* subulatis, rigidis, erectis, lurido-striatis, perianthio duplō longibribus; *antheris* linearibus, versatilibus. *Ovarium* inferum, carnosum, obsolete hexagonum, 3-loculare, polyspermum; ovulis compressis serie duplici ordinatis. *Stylus* teres, filamentorum colore, iisque longiore, decurvus; *stigmatē* capitato trigono pubescente.

For this new species of Agave I am indebted to James Bateman, Esq. who received it from his friend Mr. Skinner. The latter gentleman, travelling in Peru, found it growing on a sandy plain, and learned that it is used as a soap plant, its thick succulent tap-root possessing the property of forming a lather with water. It has dingy purple flowers, and is nearly allied to *Agave lurida*.

142. POLŮSTĀCHŮŘĂ ramulōsă.

P. ramulosa; ebulbis, foliis, scapo paniculato, floribus glaberrimis, sepalorum basi conicā elongatā, labello cuneato trifido apice carnosum margine involuto: lobis acutis intermedio minore, disco plano imberbi.

A native of Sierra Leone, whence it was imported by Messrs. Loddiges, who flowered it in September, 1838. It is a small green-flowered plant with the habit of *Polystachya luteola*, but more branched, and with branchlets at the base of its ramifications. The smooth flowers prolonged at the apex (that is to say at the base of the sepals) into a long cone, and the wedge-shaped naked lip, distinguish this from the other species previously known. The apparatus connected with the pollen-masses is very remarkable in this plant; the masses are two waxy bodies obliquely divided half-way into two very unequal lobes, and adhering to a long white wedge-shaped separable process, which has all the appearance of the caudicula of a Vandeous genus, and which is moreover

84. HELICHRYSUM scorpioides.

Labillard nov. holl. 2. 45. t. 191. DC. prodr. 6. 194.

This very beautiful New Holland plant has lately flowered in the garden of the Horticultural Society, where it had been sent by R. Mangles, Esq. who imported the seeds. It looks like a yellow everlasting-flower; the heads are large, very convex, bright yellow, almost metallic in their brilliancy; and when opened beneath a bright sun are as handsome as those of any composite flower I am acquainted with. It is a greenhouse herbaceous plant, propagated by cuttings.

85. BROMELIÆ discolor.

B. discolor; foliis angustis acutis spinoso-serratis glabris, floribus arctissimè in strobilum sessilem lateralem glomeratis squamis rigidis pungentibus spinoso-serratis, calycibus ovarisque triangularibus glaberrimis.

Folia viridia, spinoso-serrata, glabra, 2-pedalis, basi dilatata; spinis nigrescentibus, æqualibus. *Strobili* sessiles axillares, inter folia exteriora, ovata, rigida, 3 pollices longa; *squamis* ovato-oblongis, rigidis, arctissimè appressis serratis, exterioribus brunneis, lucidis, subfurfuraceis acutis, interioribus apice viridibus acuminatissimis; intimis albis, carinatis, foribus brevioribus. *Flores* corymbose glomerati, fasciculati, bractearum exteriorum longitudine, quisque bracteolæ carinatæ axillaris. *Calyx* glaber, triqueter, decolor, sepalis carinatis, inæqualibus, margine membranaceis imbricatis. *Petala* 3, rosea, mox discolora, oblonga, erecta, convexa, unguiculata, basi in tubum longum connata, calyce longiora, inappendiculata. *Stamina* 6, erecta; 3 petala opposita basi limbi inserta; 3 alterna basi dilatata utrinque dentata petala connectentia. *Antheræ* lineares, erectæ, sagittatæ, rectæ. *Ovarium*, glabrum, omninò inferum, triquetrum, 3-loculare, polyspermum; ovulis uniseriatis; *stylus* 3-quet; *stigmata* 3, linearia, facie interiore glandulosa, erecta, non tortilia.

A rare South American stove plant, which flowered lately in the possession of Miss Garnier of Wickham, near Southampton, who obtained it from South America. It has sessile spiny heads of dull pink flowers, which change to brown, and is not a handsome species. *B. longifolia* of Rudge seems its nearest ally. It will be seen by the foregoing description, that it differs in some respects from the paniced Bromnelias, especially in the long tube of the corolla and the long simple stigmas. There does not, however, appear to be any immediate necessity for creating a new genus for it.

I was certainly wrong in referring this plant to *C. viridis*, from which it differs in its sepals and petals being much narrower, the flowers less green, the lip larger, and of a different form in its upper lobe.

3. *C. jugosus* (*Maxillaria jugosa*, Lindl. in *Bot. Reg.* 1841. *misc.* 104.); sepalis oblongis incurvis obtusis, petalis conformibus concavis basi angustatis, labelli sigmoidei oblongi unguiculati pilosi jugosi lobis lateralibus nanis obtusis, intermedio semi-circulari, columnâ apice lobatâ bisulcâ villosissimâ.—*Brazil*.—Near *C. placanthera*, from which it differs in having the flower of a globose figure, with much less linear sepals and concave oblong petals narrowed to the base. These parts are of a rich cream colour, speckled with crimson. The lip has quite a different form, being semicircular at the tip, deeply furrowed and closely covered with short hair. The column has two deep furrows in front almost buried in hairs.

66. CERĒUS bifōrmis.

- C. biformis*; ramis alatis articulatis crenatis, sterilibus oblongis sessilibus, floridis lanceolatis basi teretibus, petalis linearibus acutissimis, stigmatē 5-lobo.

A curious and very pretty plant from Honduras, communicated by Sir Charles Lemon. It has bright rose-coloured flowers, not unlike those of *Cereus flagelliformis*. I hope soon to be able to figure it, with a full description by Mr. Booth.

67. BIFRENARIA.

This genus differs from *Maxillaria* proper in having its pollen-masses attached to a short gland, by a pair of distinct straps, or caudiculæ, instead of one; a character, minute indeed, but constant and readily detected, although often overlooked. On that account several species have been referred to *Maxillaria*, as I have now ascertained, and it is not improbable that others may still lie unknown among that large and troublesome genus. The following are characters of all of which I possess any certain information.

BIFRENARIA, Lindl. Sepala patula, libera, subæqualia; lateralibus cum basi productâ columnæ connata. Petala sepalis duplò minora. Labellum cum pede columnæ articulatum, cucullatum, trilobum, medio callosum. Columna brevis, semiteres. Anthera subcristata. Pollinia 4, per paria incumbentia, caudiculis duabus distinctis, glandulâ oblongâ.—*Herbæ epiphytæ, pseudobulbosæ*. Folia terminalia subsolitaria, plicata, cartilaginea. Pedunculi radicales, uniflori v. racemosi, sæpe elongati.

rather more than half their length. The seeds are scobiform, quite smooth, not at all reticulated, with a lax testa, which is prolonged at each end into a tapering withered sac, but fits pretty tight to the seed in the middle. Each seed, including its testa, is rather more than half a line long.

134. COTYLĒDŌN cristată. *Haworth in Phil. Mag.* 1827. p. 123. *DC. prodr.* 3. 399.

For this little known plant I am obliged to William Brent, Esq. of Walworth, who obtained it from the Botanical Garden of Leyden, and succeeded in flowering it. It is very well described by Haworth, so far as his account of it goes; but since M. DeCandolle regarded it as one of the species insufficiently known, it deserves to be noticed more particularly. The stem is very short, and closely covered with leaves, from between the touching bases of which there proceeds a number of light brown threads, described by Haworth as rufous hairs, but in reality withered roots, emitted by the leaves; but perishing after exposure to the air. The leaves themselves have a singular form ; they are described technically as being wedge-shaped, triangular, stalked, and terminated by a curled crest; but in more homely terms they look very like a jelly-bag, or a filter sewed up at the upper edge, and thrown on its side so as to acquire a flattened figure; they are covered with very short hairs, which are obtuse, and placed perpendicularly upon the epidermis, so that the leaves have a surface like that of fine woollen cloth. I find nothing like the furfuraceous hairiness described by Haworth, who mistook for scurfiness a great number of pallid specks, indicating subcutaneous air chambers, with which the epidermis is thickly studded. The flowering stem is an erect spike, about three feet high, covered with close-pressed slender green flowers, tipped with pink, about half an inch long, and rather longer than the internodes. The corolla is completely monopetalous, the limb only, which is revolute, being divided into five segments. The stamens grow to the sides of the corolla, those opposite the petals being a little longer than the others. The carpels are distinct, slender, rather downy near the base; the scales beneath them are white, and emarginate.

The plant is a very curious species, but it has nothing beautiful in its appearance.

rounded angles, has flowered with Messrs. Loddiges, who imported it from Oaxaca (No. 1265). It is most nearly allied to *C. filipes*, figured in the present number, but differs in the form of the lip.

181. *EPIDENDRUM* (*Encyclium*) *calocheilum*; pseudo-bulbis ovato-oblongis apice diphyllis, foliis ensiformibus obtusis coriaceis obsolete striatis paniculâ elatâ multiflorâ brevioribus, sepalis petalisque lineari-oblongis spathulatis uniformibus patentissimis, labello libero suborbiculari profundè trilobo basi carinato, lobis lateralibus latè ovatis intermedio latissimo lineato margine undulato crispato, columnâ supernè hinc alâ obtusâ. *Hooker in Bot. Reg. t. 3898.*

A Guatemala plant, from the Woburn collection, very near *Epidendrum altissimum*, but apparently distinct. The flowers, in a large panicle, are light greenish yellow with the sepals and petals tinged with purple at the points, and the lip crimson-veined with a yellow border.

182. *PLEUROTHALLIS picta*; folio oblongo coriaceo caule vaginato racemose longiore, spathâ diphyllâ, racemo plurifloro, sepalis reflexis inferiore trilineato extus basi villosa duobus superioribus ultra medium unitis maculatis, petalis columnâ longioribus ovato-lanceolatis, labello ovato carnosio velutino maculato obtuso intus basi profundè canaliculato, clinandrio dentato, anthera ovarioque pubescenti-tomentosis. *Hooker in Bot. Reg. t. 3897.*

A Mexican Orchidaceous plant, with purple flowers arranged in a spike about one-third the length of the leaf. It is very near *P. strupifolia* and *aphthosa* (which latter is the *P. peduncularis* of Hooker's Journal of Botany, vol. 3. t. 9.) but apparently distinct from both.

183. *DYCKIÄ altissimä*; foliis acuminatis recurvo-patentibus distanter spinosis glabris, scapi tomentosi (orgyalis) squamis acuminatis integris, spicâ elongatâ dissitiflorâ, bracteis acutis sepalis rotundatis brevioribus.

A native of Buenos Ayres, whence it was sent to the Glasgow garden by Mr. Tweedie. It has a flowering stem fully six feet high and slender, but the leaves are barely a foot long. The flowers resemble those of *D. rariflora* in colour, but are less brilliant. It is a rather pretty greenhouse plant, and flowered in the Garden of the Horticultural Society in October, 1841.

109. PIMELEĂ crinită.

P. crinita; foliis oppositis linearibus suprà glabris subtùs cauleque albo-villosis summis angustioribus numerosis subverticillatis imbricatis involucrantibus florum longitudine, capitulis densis terminalibus multifloris, staminibus styloque longè exsertis, calycis tubo villosi limbo supra glabro.

A very pretty new species of this genus, with snow-white flowers, smelling slightly of heliotrope (?). It forms a small shaggy greenhouse bush, native of Swan River. A specimen of it has recently flowered in the rich collection of Robert Mangles, Esq., of Sunning Hill.

110. NICOTIÂNĂ rotundifolia.

N. rotundifolia; undique pilis patentibus villosa, caule paniculato, foliis planis in petiolum brevum decurrentibus inferioribus ovato-oblongis superioribus subrotundis, corollæ tubo cylindraceo calyce duplò longiore limbo plano subæquali laciniis subrotundis emarginatis, filamentis 4 longioribus adnatis, capsulâ ovali biloculari calycis longitudine.

This new tobacco inhabits the neighbourhood of Swan River, whence seeds were received by Robert Mangles, Esq. of Sunning Hill. It has the habit of *N. suaveolens*, but the flowers are smaller, and the leaves more like those of *Petunia nyctaginiflora*. Like the former of these species the flowers are white, and give out rather a pleasant perfume in the evening. It is a hardy annual.

111. THYSANÔTÛS intricatus.

T. intricatus; ramis debilibus filiformibus intricatis, foliis squamæformibus, floribus umbellatim paniculatis hexandris, staminibus styloque decurvis.

A curious new species of this pretty genus, obtained from Swan River by Robert Mangles, Esq., of Sunning Hill. A figure of it will soon appear in this work.

112. ECHEVĒRIĂ secundă. *Booth in litt.*

E. secunda; folis rosulato-confertis cuneatis macronatis pinguibus glaucis, racemo secundo recurvo, floribus longè pedunculatis.

“Plants of this curious succulent were received by Sir Charles Lemon, Bart., M.P., in 1837, and again in 1838, from Mr. John Rule, Superintendent of the Real del Monte

Mines in Mexico, of which country it is believed to be a native. Treated like other succulents, in a pot of coarse gravelly soil, and subjected to a high temperature, with very little water, it has been found to thrive very well, and flowered in the stove at Carclew in June, 1838.

“*Stem* very short, creeping. *Leaves* numerous, concave, spatulate, and spreading, sessile, thick and fleshy, crowded, and loosely arranged round the stem as a common axis. With the exception of a few in the centre, which are much smaller than the others, the whole are similar in size and form, varying from two to two and a half inches in length, and rather more than an inch in breadth, at the widest part near the apex, from which they gradually taper towards the base, and end at the point in a small mucro. Their colour is a glaucescent green, covered with a fine bloom, which easily rubs off on being touched. The outer edges and mucro have a brownish tinge. *Flower stem* round, about a foot high, glaucous pink, rising from one side of the mass of leaves, and terminating in a unilateral, deflexed, raceme, of about ten or a dozen flowers. *Bracteas* small and fleshy, ovate-acuminate, tinged with pink at the point. *Pedicels* of the earlier flowers about an inch long, diminishing gradually both in size and length towards the extremity of the raceme. Taking the point where they join the stem as a centre, it will be found that each pedicel forms, as near as possible, an angle of about 33° with the stem. *Calyx* 5-leaved, rotate, spreading, the segments thick and fleshy, lanceolate, acute. *Tube* upwards of half an inch in length, gibbous at the base, which is a bright yellowish red, narrowing upwards to the mouth, which is acutely five-toothed, a little recurved, and of a deep yellow. *Filaments* 10, five attached half way down the petals, and the other five at the base opposite each division of the calyx, but all of the same length: *Anthers* erect, deep yellow. *Styles* 5, short, and compressed together, pale, shining green. *Ovarium* five-celled, with numerous seeds in each, and having a small fleshy process at the base, intermediate with the segments of the calyx.” *Booth in litt.*

For the above account of this pretty plant I am indebted to Mr. Booth. The species is nearest *E. cæspitosa*, from which it differs in having a one-sided gyrate raceme, and long-stalked scarlet, not yellow, flowers.

Diervilla hortensis, *grandiflora*, *floribunda*, and *versicolor*, four most beautiful shrubs, with trumpet-shaped rose-coloured or white flowers, and the habit of upright Honeysuckles.

Abelia serrata, a white-flowered bush, belonging to the same natural order as the last.

Viburnum plicatum and *tomentosum*, two plants resembling our common Gueldres Rose.

The last plant as yet figured is the *Trochodendron aralioides*, an evergreen shrub, from damp shady places in the south of Japan, where it is called *Jama-Kuruma*, or Mountain-wheel, because of the verticillate arrangement of its leaves and numerous stamens; it appears to be similar in habit to our tree Ivy.

1. HOYĀ coriăcăă. *Botanical Register*, 1839. t. 18.

I find that this very rare plant is the *Cyrtoceras reflexum* of Horsfield's *Plantæ Javanicæ*, p. 90. t. 21. Mr. Bennett, the learned author of the genus, and of the greater part of the work in which it appears, distinguishes it from *Hoya* by "the great comparative elongation of the whole of its sexual apparatus, which in *Hoya* is as remarkably depressed. The inner angle of the foliola of the corona staminea, which in *Hoya* forms a mere tooth incumbent on the anthera, is produced in *Cyrtoceras* into an erect lanceolate process, twice as long as the anthera, and equal in length to the external horn, at the base of the foliola." It appears that mutilated specimens, "apparently of the same species, or at least of a very nearly related plant, exist among the collections of Father Camel, in the Sloanean Herbarium, (vol. 231.) in the British Museum. These were gathered in the island of Luçon." "From Dr. Horsfield's notes we learn that the Javanese name of the plant is *Kappal*, and that it grows in various localities in the eastern parts of Java, at no great distance from the seashore." It must not be confounded with the *Kapal Kapal* of the Philippines, which, according to Father Blanco, is the *Asclepias* or *Calotropis gigantea*; and at all events is an entirely different plant of the same natural order.

Messrs. Loddiges find the plant so difficult to multiply, that they have not yet succeeded in obtaining a duplicate.

In consequence of the great number of Botanical periodicals now publishing, in all of which there is some, and in some of which there is a considerable amount of original matter, it is my intention to incorporate in the Miscellaneous portion of this work, every thing which I can find of real or supposed novelty, so that a reference to these pages may be in fact a reference to all the current Garden Botany. In the prosecution of this task I commence with the plants now immediately following—in which the plants not actually inspected by myself are indicated by the sign ¶.

- ¶ 2. *LISSANTHÈ stellatā*; caule minutè pubescenti, foliis sparsis oblongis breviter petiolatis glaucis mucronatis, floribus albis axillaribus solitariis breviter pedunculatis unibracteatis, limbo 5-partito apice fusco. *Floral Cabinet*, III. p. 79.

A native of New Holland. A small shrub, with glaucous leaves, and small white flowers.

- ¶ 3. *PASSIFLORA hispida*; foliis membranaceis hispidulis trilobatis ciliatis basi cordato-sinuatis subdentatis apiculatis: lobis subæqualibus obtusis apiculatis, petiolis hispidis infra medium biglandulosis, pedicellis geminis brevissimis 2-3-bracteatis, ovario elliptico glabro. *Floral Cabinet*, III. 126.

Mexico? (country not stated). Flowers small, but “exceedingly pretty,” yellowish white, with purple rays.

4. *BRĪĀ planicaulis* (*Wallich*); caule compresso folioso erecto, foliis coriaceis aveniis obtusis emarginatisque, floribus glabris intra bracteas siccas striatas subsessilibus, labello reniformi supra unguem bicalloso, petalis linearibus sepalis ovatis acutis multò angustioribus.

Upon this plant Mr. Booth has favoured me with the following communication:—

“This singular species was forwarded by Dr. Wallich from the Honourable East India Company’s Botanic Garden, Calcutta, in 1838, and added to Sir Charles Lemon’s collection at Carclew, where it flowered during the autumn of 1839. It has nothing to recommend it to the notice of cultivators, but to the Botanist it is a highly curious and interesting subject. It requires the constant heat of the stove, and seems to thrive pretty well in a pot of finely chopped moss and decomposed vegetable earth.

“*Stem* erect, fleshy and compressed, of a deep yellowish green, widening from the root upwards, where it forms a kind of flat pseudo-bulb, partly covered by the sheathing appendage to the leaves, and, at the base, by the imbricated, sheathing,

species partly described by M. DeCandolle from specimens collected by Mr. Gunn, (no. 284), and sent him by me; but it differs from that plant in not having shaggy involucre, and in its leaves, which are longer and thinner, not being revolute at the margin, &c. In habit it is more like *E. glandulosa*, *DC.* also a Van Diemen's Land plant; but the latter species has numerous campanulate flower-heads and a short ray. All the green parts of this plant are covered by specks of a whitish viscid exudation.

113. *STANHÖPĚĚ oculatā*. Botanical Register, t. 1800.

Var. *Barkeriana*; sepalis petalis et columnæ dorso purpureo maculatis, hypochilii sacco discolore.

This is a remarkable variety of *S. oculata*, obtained from Mexico by Mr. Barker. It looks like *S. insignis* with the lip of *S. oculata*, and is very handsome. The sepals, petals, and column are covered with numerous purple freckles rather than spots, which, as the flower fades, run together, as if their colouring matter were dissolved; so that at last the flower becomes of a dull wine-red tint.

114. *PORTULĀČĀ grandiflōrā*; *rutila*. Hooker in Botanical Magazine, t. 2885.

This is a beautiful variety of a greenhouse perennial, of whose brilliancy the figure above quoted in the Botanical Magazine gives an inadequate idea. The flowers are the richest crimson, more bright than even *P. Gilliesii*, and they are nearly as large as a half-crown when full blown. The plant is succulent, with long cylindrical leaves, and will only expand its blossoms under sunshine; but as it is easily cultivated that circumstance signifies little, and when it does open it is a magnificent object. The plants I am describing have been raised in the garden of the Horticultural Society, from seed sent from Florence by the Hon. Frederick Thelluson. The species is a native of Mendoza.

115. *STENOCHĪLŪS longifoliū*s (A. Cunn. mss.); foliis linearibus canaliculatis acuminatis coriaceis glanduloso-punctatis minutissimè pubescentibus floribus pluriès longioribus, corollā tomentosā: limbo subæqualiter 5-partito, ovario biloculari.

A shrub, discovered many years ago by Mr. Allan Cunningham, in the interior of New Holland, and latterly again met with by Major Sir Thomas Mitchell, by whose people it

albinervium, Michx. Fl. amer. I. p. 110.—*R. acuminatum*, Wall. Cat.—*R. triste*, Pallas.—*R. procumbens*, Pallas.—*R. resinosum*, Pursh Fl. amer. I. p. 163.—*R. bracteosum*, Dougl.—*R. viscosissimum*, Pursh l.c.—*R. hudsonianum*, Richards.—*R. glaciale*, Wall.—*R. inebrians*, Lindl. Bot. Reg. t. 1471.—*R. cereum*, Dougl. Lindl. Bot. Reg. t. 1263.

43. PUYA recurvāta.

Scheidweiler in Garten Zeitung, 1842, p. 275.

P. caule simplici altissimo, squamoso, pulverulento; squamis herbaceis, lanceolatis acutis; foliis integerrimis, acutis, apice denticulatis, supra nitidis, subtus floccoso-pulverulentia; spica terminali; bracteis imbricatis, arcte appressis, siccis, roseis, acutis; floribus subgaleatis sessilibus, recurvatis, albis; staminibus lutescentibus corollam æquantibus; stylo triangulari; stigmatibus lobatis, post anthesin contartis.

A Brazilian plant of the Bromeliaceous order. Its flower stem is described as being 5 feet 3 inches high, covered with green lanceolate scales. The leaves are $3\frac{1}{2}$ feet long and 2 inches broad, shining green above, white with cottony wool on the under side. The spike is about a foot long, covered with white sessile flowers. It has flowered in the Botanical Garden at Brussels.

44. PITCAIRNĬA undulāta.

Scheidweiler in Garten Zeitung, 1842, p. 275.

P. scapo erecto, simplici, squamoso, pulverulento, coccineo; squamis lanceolatis, cuspidatis, basi scariosis, spice herbaceis, integerrimis; racemis elongatis, simplicibus; pedicellis floribusque coccineis; perianthii lacinis exterioribus carnosius carinatis; bracteis lanceolatis siccis, foliis lanceolatis integerrimis, longissime cuspidatis, margine undulatis vel rugoso-undulatis, supra glaberrimi, subtus albis pulverulenti; scapum æquantibus, staminibus inclusis.

A native of Brazil, which has flowered in the Botanical Garden at Brussels. The leaves are dull green, here and there striped with yellow, and the flower stem scarlet, $2\frac{1}{2}$ feet high. The spike is 10 inches long; the flowers scarlet, with bracts of the same colour.

45. CATHA paniculāta.

Scheidweiler in Garten Zeitung, 1842, p. 275.

C. frutex spinosus, ramis angulatis; foliis petiolatis ovato-lanceolatis serratis, utrinque attenuatis, mucronatis; ramis junioribus spinosis, spinis

A caulescent species, with lanceolate leaves seven or eight inches long. The flowers are small, pink, smooth, in close spreading racemes much shorter than the leaves. The column is dark purple at the top. Mr. Prince originally found it at Singapore, and communicated it to Dr. Wallich. Messrs. Loddiges, have since received it from the same place through Mr. Cuming. It is a pretty plant, worth cultivation.

57. PITCAIRNIA micrāntha.

P. micrantha; foliis ensiformibus acuminatis basi extūs pubescentibus, racemo tenui paniculato, floribus minutis, petalis basi nudis lanceolatis acutis.

“This singular little species was found among some Orchidaceous plants imported from Rio, in December, 1841, by Lieut. Christopher Smith, of H. M. Packet “Star,” and presented to Sir Charles Lemon, Bart. M.P. It flowered at Carclew in March, 1843, and proves to be very distinct from any other of the genus to which it belongs, as well as the smallest that has yet come under my notice. It requires the constant heat of a damp stove; and thrives very well either in loose vegetable matter, or on the decayed branch of a tree.

“*Leaves* numerous, flat, undulated at the margin, flaccid, spreading and recurved, linear-lanceolate acute, from nine inches to a foot long, and about an inch wide ; of a deep green above, and a pale glaucous green beneath, without any spines at the edges. *Scape* erect, nine inches long, issuing from the centre of the plant, of a brownish green, remarkably slender, round and downy, with several linear bracts along the stem, which is half its length, covered with flowers. *Flowers* white, not exceeding a quarter of an inch across, drooping and opening one or two at a time in succession, from the base upward. *Pedicel* round, .very short, almost concealed by a brown-coloured acuminate bract to each. *Sepals* three, of a pale green, ovate acuminate, alternate with the petals, and about half their length. *Petals* three, recurved, lanceolate acute. *Filaments* half as long as the petals, very slender, bearing long yellow anthers, which roll up and appear as if they were round when the flower has been some time expanded. *Ovarium* about the length of the sepals, deep green, roundish oblong, crowned by the style, which is round and slender, and a little shorter than the petals.”—Wm. B. Booth.

allied to this, and it is certain that among the distributed specimens of that plant are branches of the present species without flowers.

Icones plantarum rariorum horti regii Botanici Berolinensis. By H. F. Link, Fr. Klotzsch, and Fr. Otto. Part I.

This is a work in all respects worthy of the present state both of Botanical science and Pictorial art. It is intended to be a periodical record of the new plants that flower in the Royal Botanical Garden of Berlin, and will appear in numbers of the small quarto size, each of which contains two sheets of letter-press and six coloured plates. The plan of the work is that of the Botanical Register and Magazine, and it is to be hoped that it will meet from the public with the same favourable reception as has attended those successful publications. The names of the authors, among the highest in Botanical and Horticultural science, are an ample guarantee of the manner in which the work will be conducted; and the richness of the Berlin garden in new plants, render it of no small importance to the public that the species which are collected there should be made known as quickly as they appear. I may therefore be permitted to express a hope that this publication will find many subscribers among the wealthy Botanists and Horticulturists of this country. In the meanwhile the contents of each number of the work will be briefly given here, as fast as they appear, but under distinct numbers, so as to be of ready reference. The work will be quoted as *Link, Klotzsch, & Otto Ic.*

210. PŮYĚ *Altensteinii*. Link, Klotzsch, & Otto, ic. t. 1.

A most beautiful plant, with the habit of *Tillandsia*, long green unarmed leaves, and oval heads of rich scarlet bracts, from among which protrude long snow-white flowers. It was found by Moritz in the year 1886, in his journey through Columbia and to the Cordilleras, between La Guayra and Caraccas. It requires the stove, of which it is a splendid ornament.

211. LOBĚLĚ *discolor*. Link, Klotzsch, & Otto, ic. t. 2.

A neat greenhouse herbaceous plant, with deeply lobed heart-shaped leaves spreading flat upon the ground, and erect panicles of small blue flowers. It was found by Mr. Charles

122. SĒDŪM mīśērūm.

S. miserum; caulibus procumbentibus, foliis inferioribus sparsis teretibus depressis superioribus ovato-linearibus semicylindraceis aggregatis, floribus sessilibus solitariis terminalibus, sepalis foliaceis petalis ovatis cucullatis apiculatis aspero-carinatis longioribus, staminibus petalinis brevioribus, squamis cuneatis retusis.

An inconspicuous succulent annual, raised from Mexican seeds, imported by George Frederick Dickson, Esq. It grows about nine inches high, or rather longer, for it falls prostrate if not supported; its flowers are green, and almost hidden among the fleshy leafy sepals. It multiplies itself by seeds, and by fragments of its brittle branches, which drop off the parent, and strike root into the ground.

123. CARPĒSĪŪM pubēscēns.

Wall. Cat. n. 3199. DC. prodr. v. 281.

This plant has lately flowered in the garden of the Horticultural Society, where it was raised from seeds received from Dr. Falconer. It is certainly a mere variety of *Carpesium cernuum*, and hardly so much. Nor does there appear any good character to distinguish from our European plant the *C. nepalense* of Lessing. The copious hairiness of that supposed species is nearly equalled by the plant now before me; and the size of the capitula, described by De Candolle as being four lines broad, is of no importance; for on the same living cultivated specimen they vary from five to twelve lines in diameter, according to their age.

124. ONCĪDĪŪM hīāns.

O. hians; sepalis petalisque æqualibus ovalibus obtusis leviter concavis, labello angusto auriculato medio contracto apice bilobo, callo disci bilobo utrinque dentato carnosio papilloso erecto columnâ parallelo eique longitudine æquali, alis columnæ carnosæ acutis vix falcatis.

I have only seen flowers of this little species, which comes near to *O. carinatum*. Messrs. Rollissous received it from

I. September, 1838.

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places in the Barranca de Tioselo, by Schiede, whose MS. description, together with a specimen, has been obligingly communicated to me by Prof. Schlechtendahl, and is here subjoined.

Fol. calycina omnia libera, 5, patentia, obscure flavescentia, lineis atropurpureis percursa, oblonga; 3 galeam formantia conniventia, 2 lateralia externa obliquiuscula deflexa. *Labellum* liberum erectiusculum, basi parum angustatum, reliquis calycinis foliolis multo brevius, trifidum, lobo intermedio multo longiore, apice reflexo, atropurpureum, in medio laminae trituberculatum. *Gynostemium* labello paulo brevius, erectiusculum, paulo anterieus curvatum, non alatum. *Anthera* terminalis anticam partem apicis truncati occupans. *Operculum* univalve transverse sese solvens, valde deciduum. *Corpuscula pollinifera* 4, 2 anteriora labello propria majora, posteriora minora, omnia membranulae lunatae insidentia, sine pedicello; membranulae cornua in anteriore parte gynostemini affixa sunt.—*Schiede mss.*

122. EPIDENDRUM (*Encyclia*) *bractescens*; pseudobulbis ovatis caespitosis 3-4-phyllis, foliis linearibus, scapo debili 3-4-floro, bracteis infimis foliaceis floribus longioribus supremis obsoletis, floribus nutantibus longè pedunculatis, sepalis petalisque lineari-lanceolatis acuminatis discoloribus labello longioribus, labelli liberi lobis lateralibus apice recurvis obtusis subdentatis intermedio unguiculato subrotundo-ovato multò longiore secus unguem elevato sulcato pubescente.

This is one of the prettiest of the small species of Epidendrum, and is quite distinct from all hitherto described. Mr. Hartweg found it in Mexico in the vicinity of Oaxaca. The pseudobulbs are exactly ovate, closely clustered, and about as large as a pigeon's egg. The flowers have a beautifully but delicately painted white lip, the gay effect of which is heightened by the contrast with the dingy purple of the long narrow sepals and petals. Its nearest affinity is with *E. papillosum* and *E. pastoris* of Link and Otto, the *E. Linkianum* of Klotzsch. The flowers have no smell.

123. SARCANTHUS *oxyphyllus*. Wallich mss.

This plant, which has been lately received from Calcutta by several persons, has flowered in the garden of the Horticultural Society, and proves to be nothing more than a narrow-leaved variety of *Sarcanthus rostratus*, a species of no beauty, long since introduced by the Horticultural Society from China.

124. SEDUM *multicaule* (Wall. mss.); caulibus plurimis erectis glabris ramosis apice 3-partitis, floribus secus ramulos sessilibus unilateralibus, foliis linearibus adnatis acuminatis apiculatis carnosissimis, sepalis 5 foliaceis petalia luteis longioribus, squamulis hypogynis retusis.

This native of the Himalaya Mountains, where it appears

to be very common, has been obtained by the Horticultural Society from seeds presented by the Honourable Court of Directors of the East India Company. It is a perennial with deep green fleshy leaves and pretty starry yellow flowers, and if hardy, as appears probable, will make an excellent plant for rockwork. The branches are about a foot or more long, but in consequence of their spreading habit they do not appear more than 6 or 9 inches high even in rich soil.

125. STANHŌPEĀ *graveolens*; petalis ovato-lanceolatis undulatis basi car-nosis, labelli hypochilio sub-compresso saccato intus glaberrimo antice bi-dentato et inter dentes profundè sulcato, metachilii cornubus acuminatis-simis incurvis, epichilio subrotundo-ovato integerrimo, columnæ apice truncato-bilobæ alis latissimis subquadratis.

This is a noble species with the habit and general appearance of *S. saccata*, but far handsomer. The sepals and petals are of the most delicate straw colour; the lip at the base, and the central parts of the flower generally, are of a deep rich apricot yellow, while the horns and upper end of the lip are like ivory turning yellow. It differs from *S. saccata* in its hypochilium being much deeper from front to back, the petals smaller, the epichilium entire, and the column much more broadly winged. It was purchased from Mr. Tate who imported it from Peru, by the Hon. and Rev. W. Herbert, who informs me that its leaves are 4 inches wide, and 17 inches long besides the petiole, which is $2\frac{1}{2}$ inches long, acute with seven strong ribs. Its odour is so powerful that it communicates itself to the fingers after touching the flowers, and like many other smells, though agreeable in itself, is offensive from its intensity.

126. APŌRŪM *Leonis*; (A indivisum *Gen. & Sp. Orch. p. 70. nec Blumii*) foliis coriaceis ovatis v. brevissimè cultratis obtusis, floribus solitariis terminalibus, labello lineari-oblongo emarginato ecristato apice ciliato-dentato et minutissimè pubescente.

A native of Singapore, where it was originally found by Mr. Prince, who communicated it to Dr. Wallich with a rude drawing, upon which it was admitted by me into the *Genera and Species of Orchidaceous plants* as synonymous with the *A. indivisum* of Dr. Blume. It having lately been brought home from the same place in a living state by Mr. Cuming, under the name of "Lion's mouth," and Messrs. Loddiges having sent it to me in flower, I am now able to state that

19. SCELOCHILUS Ottonis.

Link, Klotzsch & Otto, Icones plantarum, t. 31.

SCELOCHILUS (Klotzsch in Otto et Dietrich Gartenzeitung. 1841. p. 261.)

“Perigonii conniventis foliola exteriora angusta, navicularia, carinata, basi subcohärentia, lateralia labello supposita, in unicum connata, basi in calcar obtusum, breve producta; interiora latiora, libera. Labellum integrum, supra basin columna continuum, basi brevissime bifidum, liberum, disco calloso, puberulo, longitudinaliter bicostato, antice bidentato, dentibus obtusis, conniventibus; costis infra medium bicornutis; lamina apice emarginata, subexserta. Columna semiteres, nuda, labello subduplo brevior. Anthera semibilocularis. Pollinia 2, sphaerica, solida, caudicula lineari instructa, glandula parva, obovata.—Herba caracasana, epiphyta; rhizomate caespitoso; pseudobulbis subnullis; foliis solitariis, coriaceis, carinatis, basi vaginis squamæformibus, conduplicatis, involucratis; racemo radicali; floribus compressis, flavidis.

S. *Ottonis*; foliis oblongis, coriaceis, læte-viridibus, margine acutis, subtortuosis, apice conduplicato-acutissimis, recurvis; racemo radicali subramoso, foliis parum longiore; foliolis perigonii interioribus obovatis, obtusis, intus longitudinaliter purpureo-striatis, sparsim pilosis.”

This new genus of Orchidaceous epiphytes has been found in the Caraccas by Mr. Edward Otto, and by him sent to the Royal Botanic Garden, Berlin, where it has flowered. It occurred on the stems of trees in dense forests, 5,600 feet above the level of the sea. The habit of the plant is that of *Burlingtonia*, to which it approaches very nearly. The flowers are yellow, rather more than half an inch long, and do not spread flat, but are half closed up.

20. TILLANDSIA vitellina.

Link, Klotzsch & Otto, Icones plantarum, t. 40.

T. *vitellina*; “subacaulis; foliis latis, oblongo-lanceolatis, acuminatis, subcoriaceis, integerrimis, læte-viridibus, utrinque glaberrimis; spica multiflora terminali, subramosa, pendula; floribus sessilibus, bracteis parvis, foliaceis suffultis; perigonii foliolis exterioribus calycinis saturate viridibus, interioribus longioribus vitellinis, apice dilatatis, patentibus; genitalibus inclusis; filamentis subulatis; germine pyramidal-trigono; stylo subnullo; stigmatе trilobo, lobis linearibus divaricatis; ovulis apice paposo-comosis.

A smooth-leaved stove plant, with the habit of a small Pine-apple, and little yellow flowers growing in a nodding slightly branched spike. This also is one of Mr. Otto’s discoveries, having been found by him in Venezuela, growing

on the branches of a large tree called Zamang de Guere, which appears to be the *Inga cinerea* of Humboldt. It has flowered in the Royal Botanic Garden, Berlin.

21. EPIDENDRUM marginatum.

Link, Klotzsch & Otto, Icones plantarum, t. 36.

This is the *Epidendrum radiatum* figured at plate 45, of our volume for 1844.

22. SPHÆROTELE coccinea.

Link, Klotzsch & Otto, Icones plantarum, t. 38.

This is *Stenomesson coccineum*.

23. PHÆDRANASSA chloracra.

W. Herbert.

PHÆDRANASSA; *Herbert*. Amaryllideæ; § Hippeastriformes. *Germen* deflexum trigonè oblongum apice constricto; *tubus* crassus decurvus latere inferiore brevior sexcostato-compactus profundè sexsulcatus ore angustato; *limbus* pendulus laciniis spatulatis convolutis, sepalis inferne margine fistulæformiter convolutis superne laminâ canaliculatè explanatâ, petalis subcanaliculatis laminâ latiore; *filamenta* complanata inferne gradatim latiora infra tubi faucem pariter inserta conspicuè decurrentia recta, superiora tria breviora, inferiora producta; *antheræ* breves versatiles infra medium affixæ; *stylus* rectus stigmate simplici clavato.—*Plantæ Americanæ bulbo ovato, scapo tereti crassè carnosò angustè fistulato; foliis hysteranthiis petiolatis; ad Stenomesson inter Pancratiformes et Pentlandiam a Phycellâ vergunt.*—W. H.

P. chloracra; (*Hæmanthus dubius*, H. et B. Kunth. 1. 281. *Phycella chloracra*, Herb. Am. 155.) caule bipedali, umbellâ circiter sexflorâ, spathâ bracteâtâ marcescente, pedunculis subæqualibus $\frac{5}{8}$ - $\frac{7}{8}$ unc. viridibus, germine $\frac{5}{8}$ unc. viridi, perianthio ultra-vel subbiunciali rubro laminis viridibus margine pallido subundulato subacutis, stylo perianthium filamentis albis stylum album superantibus, antheris pallidè subluteis, foliis viridibus subacutis petiolo 1-2-unciali laminâ subpedali circiter $2\frac{3}{4}$ uncias latâ.—W. H.

24. TIGRIDIA lutea.

Link, Klotzsch & Otto, Icones plantarum, t. 34.

This is apparently the same as Mr. Herbert's *Hydrotænia lobata*; and is a plant of no such beauty as the common *Tigridias* possess.